

Construction Notice West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project



PUCO Case No. 25-0484-EL-BNR

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative Code Section
4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

June 20, 2025

Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

Construction Notice

AEP Ohio Transmission Company, Inc.
West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

4906-6-05

AEP Ohio Transmission Company, Inc. (the "Company") provides the following information in accordance with the requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-5(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Construction Notice (CN).

The Company proposes to construct the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project (the "Project") located in Fairfield County, Ohio. The Project involves adjusting 0.1 mile of the West Lancaster – South Baltimore 138kV Transmission Line (approved in Case No. 24-0689-EL-BLN), changing two structure types from single, steel monopoles to H-frame structures. The adjustment is required due to structure height conflicts with South Central's future upgrade plans of their 69kV line that crosses under the West Lancaster – South Baltimore 138kV line. The Project will remain within the acquired, existing 100 foot right-of-way ("ROW"). Figures 1 and 2, included in Appendix A, show the location of the Project in relation to the surrounding vicinity.

The Project meets the requirements for a CN because it is within the types of projects defined by item 1(a) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

(2) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure, for a distance of:

(a) Two miles or less.

The Project has been assigned PUCO Case No. 25-0484-EL-BNR.

B(2) Statement of Need

If the proposed project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

The Company has identified the need to rebuild the West Lancaster – South Baltimore and a segment of the South Baltimore – North Newark 138 kV Transmission Lines. The conductor was installed in the 1950's and has not been replaced since the lines were originally put in-service. The majority of the structures are wood structures between 25 and 70 years old and make up approximately 72% of structures along the lines. Some structures have been replaced over time with steel, due to their age and condition. Today, there are a significant number of open structural conditions reported on the 14.4 mile project segment affecting the poles and other structural components. These conditions include damage to structures, insect and woodpecker damage, along with rot conditions on structures. There are 51 unique structures with at least one open structural condition reported, which correlates to 49% of the structures along the Project. Further, there are several spans of conductor and shield wire with broken strands.

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Considering the age and condition of the transmission lines, the Company has identified the need to rebuild the assets using modern materials and current engineering and construction standards. The Project will also support continued customer expansion in the Lancaster area.

Failure to address asset renewal needs will increase the risk for reliability issues due to the age and conditions of the current facilities.

The need and solution for this Project were presented to PJM on February 15, 2024, and March 15, 2024, respectively, see Appendix B. The project was subsequently assigned a PJM number S3308. The Project was not included in the Company's 2024 Long Term Forecast Report (LTFR) because the solution was not known at the time of filing.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The Project is located in Fairfield County, Ohio. Figure 1 in Appendix A shows the location of the Project in relation to the existing utility infrastructure in the area.

B(4) Alternatives Considered

The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

The Company conducted an analysis that included initial investigations of engineering alternatives for the avoidance of conflicts with South Central's future upgrade plans of their 69kV line. Based on ROW constraints between the adjacent roadway and residential property appurtenances, the location of the structure could not be moved back or forth in line, such that the conflict would be resolved. Options for changing the height and/or type of structure was then analyzed. In order to build the structures higher, the height would affect multiple structures in a line and would be greater visibility and wider structure bases, which would affect the adjacent residences. It was then decided to lower the structures and change the structure type to maintain appropriate tensions on the line. No other alternatives were identified for the Project.

Following the initial analysis, it was decided that reducing the height of the structures and changing the structure type was the most feasible option which resulted in resolution of the conflict with South Central's project and had the least impact on adjacent property owners. All options had similar minimal impact on environmental and cultural resources in the area and confirmed that reducing structure height and changing the structure type is the most feasible option. Any other alternative would add impact to residences without any additional benefit.

Collectively, the Project represents the most suitable location, structure height, and structure type and is the most appropriate solution for meeting the Project needs.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

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The Company maintains a website (AEPOhio.com/LancasterMillersport) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library in each political subdivision affected by this Project. The Company also retains land agents who will discuss project timelines, construction and restoration activities with affected owners and tenants.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in December 2024, and the anticipated in-service date will be August 2026.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figure 1 in Appendix A provides the proposed Project area and existing transmission facilities on a map of 1:24,000-scale (1-inch equals 2,000 feet), showing the Project on a United States Geological Survey (USGS) 7.5-minute topographic map of the Baltimore and Carroll quadrangles. Figure 2 in Appendix A shows the Project area on ESRI World Imagery, dated 2021, as provided by the Environmental Systems Research Institute (ESRI), at a scale of 1:6,000 (1-inch equals 500 feet).

To visit the Project site from Columbus, Ohio, take I-70 East to US-33 E toward Lancaster for approximately 22 miles. Use the right lane to take the ramp at exit 145 toward Lancaster Business Route, then continue for 0.7 miles on Columbus-Lancaster Rd NW. Turn left onto Coonpath Td NW and continue for approximately 2.8 miles to the Project site. The approximate address of the two structures is 1610 Coonpath Rd NW, Lancaster OH 43130, at latitude 39.769329, longitude -82.629160.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

A list of properties required for the Project are provided in Table 1, below.

Table 1 – Property Agreements

Property Agreements for West Lancaster – South Baltimore – West Millersport 138 kV Rebuild Project Construction Notice		
Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
0130036610	Easement	No
0130086900	Easement	No
0130058000	Easement	No
0130087000	Easement	No

The form easements in Appendix C represents the easement rights the Company would seek if condemnation proceedings were necessary to construct, operate, and maintain these facilities.

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B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The West Lancaster – South Baltimore 138 kV structure replacements are anticipated to include the following:

- Voltage: 138kV
- Conductors: 1033.5 kcmil 54/7 Curlew/ACSS
- Static Wire: 144ct OPGW 0.646" Diameter and 7#8 Alumoweld
- Insulators: NCI
- ROW Width: 100 Feet
- Structure Type: Two (2) Single circuit, H-Frame steel tangent structures with direct embedded foundations

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

Three loading conditions were examined: (1) Normal Maximum Loading, (2) Emergency Loading, and (3) Winter Normal Conductor Rating, consistent with the OPSB requirements. Normal Maximum Loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this circuit of this line would operate at its WN rating in the foreseeable future.

EMF levels were computed one meter above ground under the line and at the ROW edges (50/50 feet, left/right, of centerline). The results, calculated using BPA's CAFEP software, are summarized below.

Table 1: EMF Calculations for the West Lancaster-South Baltimore-West Millersport 138 kV Rebuild Project

West Millersport – South Baltimore					
Condition	Load (A)	Phasing Arrangements	Ground Clearance (ft)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Max. Loading [^]	379	A-B-C	32.4	(0.27/1.16/0.25)	(10/32/12)
(2) Emergency Line Loading ^{^^}	502	A-B-C	32.3	(0.27/1.17/0.25)	(13/43/17)
(3) Winter Conductor Rating ^{^^^}	2381	A-B-C	25.8	(0.30/1.68/0.26)	(67/310/90)

South Baltimore – West Lancaster					
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Condition	Load (A)	Phasing Arrangements	Ground Clearance (ft)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Max. Loading [^]	343	A-B-C	29.3	(0.27/1.37/0.24)	(9/35/12)
(2) Emergency Line Loading ^{^^}	466	A-B-C	29.2	(0.27/1.38/0.24)	(12/48/16)
(3) Winter Conductor Rating ^{^^^}	2381	A-B-C	24.3	(0.29/1.85/0.25)	(68/343/92)

*EMF levels (left ROW edge/maximum/right ROW edge) computed one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and 1.0 P.U. Voltages. ROW width is 50 feet (left) and 50 feet (right) of centerline, respectively.

[^]Peak line flow expected with all system facilities in service.

^{^^}Maximum flow during a critical system contingency

^{^^^}Maximum continuous flow that the line, including its terminal equipment, can withstand during winter conditions.

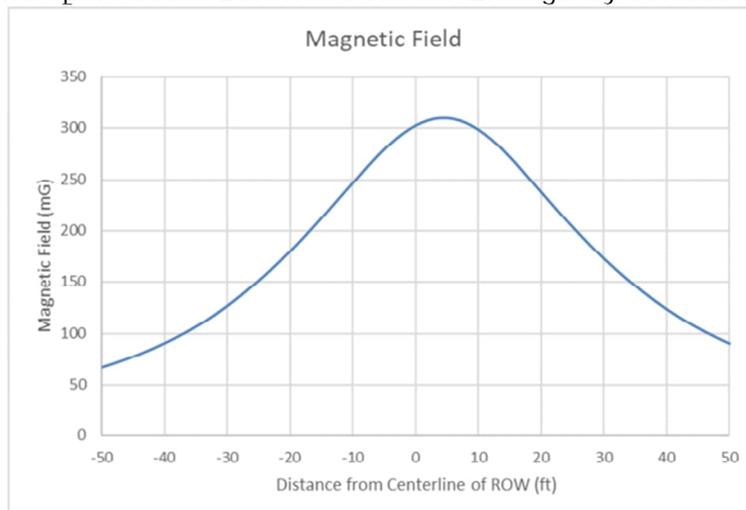
For power-frequency EMF, IEEE Standard C95.1™-2019 provides the following exposure reference level (ERL) limits:

	General Public	Controlled Environment
Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9040	27,100

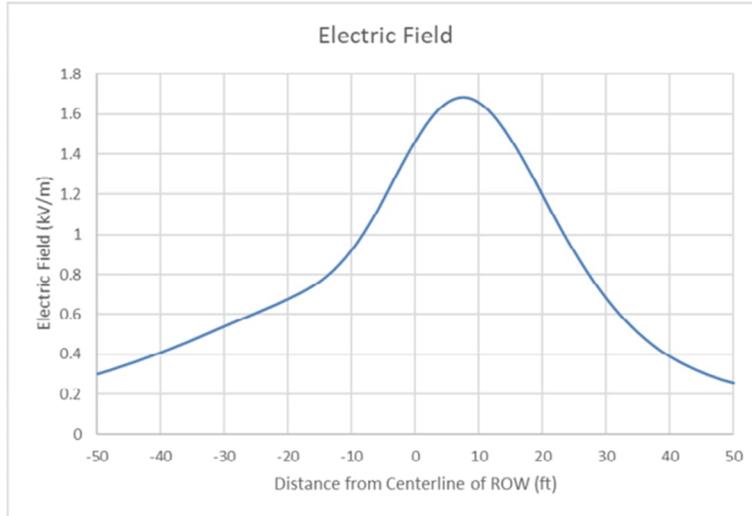
The above EMF levels are well within the limits specified in IEEE Standard C95.1™-2019. Those limits have been established to "protect against established adverse health effects in humans associated with exposure to electric, magnetic, and electromagnetic fields in the frequency range of 0 Hz to 300 GHz."

The following plots show the magnetic fields and electric fields across the ROW under winter emergency conductor rating (worst case):

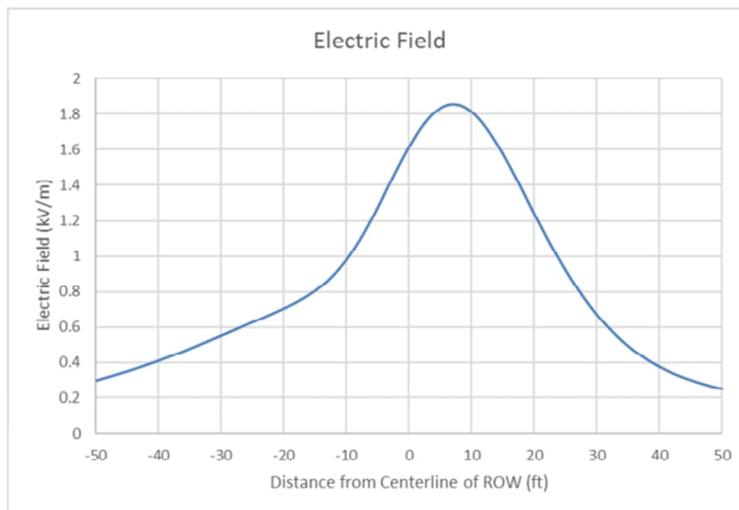
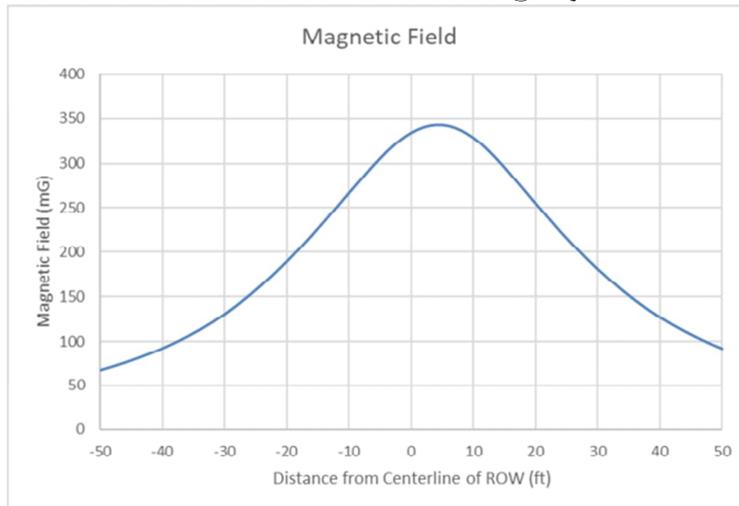
West Millersport-South Baltimore Winter Emergency Conductor Rating:



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South Baltimore-West Lancaster Winter Emergency Conductor Rating:



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B(9)(c) Project Cost

The estimated capital cost of the project.

The cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$60,444,415 based on a Class 4 estimate. Pursuant to the PJM Open Access Transmission Tariff ("OATT"), the costs for this Project will be recovered in the AEP Ohio Transmission Company, Inc.'s Federal Energy Regulatory Commission ("FERC") formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Ecological Impacts

The applicant shall describe the social and ecological impacts of the project:

B(10)(a) Land Use Characteristics

Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

An aerial photograph of the Project vicinity is provided as Figure 2. The majority of the Project has historically been residential in nature, with the Project area proceeding through residential lawns and adjacent to houses. A portion of the project is also within an area surrounded by woodlands. the Project area within Fairfield County. A portion of the Project also proceeds through a heavily urbanized portion within the City of Lancaster, consisting of residential and commercial properties. There are no parks, churches, cemeteries, wildlife management areas, or nature preserve lands within 100 feet of the Project.

B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

The Fairfield County Auditor provided a list of parcels registered as Agricultural District Land on May 19, 2025. The Agricultural District Land parcel lists are updated each calendar year. There were no parcels within the Project ROW identified as agricultural district lands. No agricultural district land or agricultural land is located within the proposed ROW of the Project.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

A Phase I Archaeological Investigation and a History/Architecture Investigation for the Project occurred in April and May 2024. Thirty-two (32) archaeological sites and 84 architectural resources of 50 years of age or older were identified within the Area of Potential Effect (APE).

On May 11, 2024, a response from the Ohio State Historic Preservation Office ("SHPO") was received. The SHPO concurred with the recommendations of eligibility and stated that, of the identified sites, one archeological site (33FA0419) was recommended for avoidance or additional investigation and two architectural sites (FAI0090105 and FAI0090210) were recommended as being eligible for listing in the National Register of Historic Places (NRHP).

On June 22, 2024 a response was received from the SHPO regarding an addendum to the West Lancaster-South Baltimore section of the Project. Three OAI sites (33FA0180, 33FA0419, and 33FA1720) were

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identified as within the project area. No further coordination is recommended for site #33FA0180, while additional investigation is recommended for site #33FA1720. At the time of submission, Phase II assessment work for OAI site 33FA0419 was actively underway and the entirety of this expanded work area will be addressed through those investigations. Likewise, per the submission, OAI site 33FA1720 is located within this expanded work area and will be addressed concurrently with the Phase II investigations for site 33FA0419. Finally, two new OAI sites were identified and neither site was recommended eligible for listing on the NRHP.

The Company has begun Phase II investigations at site 33FA0419 and 33FA1720, and has submitted an avoidance plan to SHPO for sites 33FA2873 and 33FA2898. A response from the SHPO regarding the submitted avoidance plan is still pending. All other sites are avoided with the current draft access plan. Current correspondence with SHPO is provided as Appendix C. Additional coordination correspondence will be provided as received.

The Phase II investigations are not within the vicinity of the two structures that are the focus of this Construction Notice.

B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), a Notice of Intent was filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000006. The Company also coordinated stormwater permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Stormwater Pollution Prevention Plan to minimize erosion and control sediment to protect surface water quality during storm events. No further stormwater permits are necessary as part of the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project.

The Company's consultant conducted a stream and wetland delineation as part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN). During the survey, no wetlands or streams were identified within the portion of the project related to this filing and no stream or wetland permitting is anticipated.

The Project is not located within the FEMA 100-year floodway.

There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), coordination letters were sent to United States Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW) on March 25, 2024, seeking an environmental review for potential impacts to threatened

Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

and endangered species. Response letters were received on April 17, 2024, and April 26, 2024 by the USFWS and ODNR, respectively.

According to the response letters received from the USFWS dated April 17, 2024 and ODNR dated April 26, 2024, four bat species, northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalists*), little brown bat (*Myotis lucifugus*), and tricolored bat (*Perimyotis subflavus*) were identified as being within range of the Project area and ODNR/USFWS request adherence to seasonal tree clearing activities (October 1 to March 31). Based on general observations during the ecological survey, the existing land use is primarily urban or agricultural row crop. Forested clearing is not anticipated; any tree clearing needed for the 138kv will be completed between October 1 to March 31 unless agency (ODNR/USFWS) permission is obtained. Additionally, the Company's consultant completed a desktop review for potential hibernaculum within 0.25 miles of the Project area and no caves, mines, and/or karst features were identified. As per ODNR/USFWS current guidance, further coordination regarding potential hibernaculum is only necessary if the habitat assessment find potential habitat within 0.25 miles of the Project area. Therefore, no further coordination was necessary with either the ODNR and/or USFWS regarding these species. Results of the desktop habitat assessment has been included within Appendix C.

The ODNR identified one mussel species, Kidneyshell (*Ptychobranthus fasciolaris*), within 1 mile of the West Lancaster – South Baltimore 138kV Transmission Line Project area. However, due to the absence of in-stream work within the Project area, no impacts are anticipated to this species and further coordination with the ODNR is not warranted.

The ODNR also identified a Great Blue Heron Rookery within 1 mile of the West Lancaster – South Baltimore 138kV Transmission Line Project area. This species is not recorded within the Project area. Based on existing site conditions, potential nesting habitat for the Great Blue Heron was *not* identified due to the existing land use being urban areas, residential lawns, and actively farmed agricultural areas. Therefore, no further coordination regarding the rookery was warranted as no habitat was present.

The ODNR also identified two aquatic fish species, the northern brook lamprey (*Ichthyomyzon fossor*) and the popeye shiner (*Notropis ariommus*), within range of the West Lancaster – South Baltimore 138kV Transmission Line Project area. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. Due to the absence of in-stream work within the Project area, no impacts are anticipated to this species and further coordination with the ODNR is not warranted.

Lastly, the ODNR commented that the Project is within range of one bird species, Northern harrier (*Circus hudsonius*). Based on existing site conditions, potential nesting habitat for the Northern Harrier was identified within the Project area. As per the ODNR initial guidance provided in Appendix D, this species is not likely to be impacted by the West Lancaster – South Baltimore 138kV Transmission Line Project if their habitat will not be impacted. Therefore, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31.

The West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project is also covered by these agency consultations, and no further consultation is required for this Project.

A copy of the agency correspondence is provided in Appendix D. Additional information regarding habitat assessments within the Project area is provided within the Wetland Delineation and Stream Assessment Report found in Appendix E.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the

Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), the Company's consultant prepared an ecological survey report for the entire line rebuild, which is provided in Appendix E. No wetlands or watercourses were identified within the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project area.

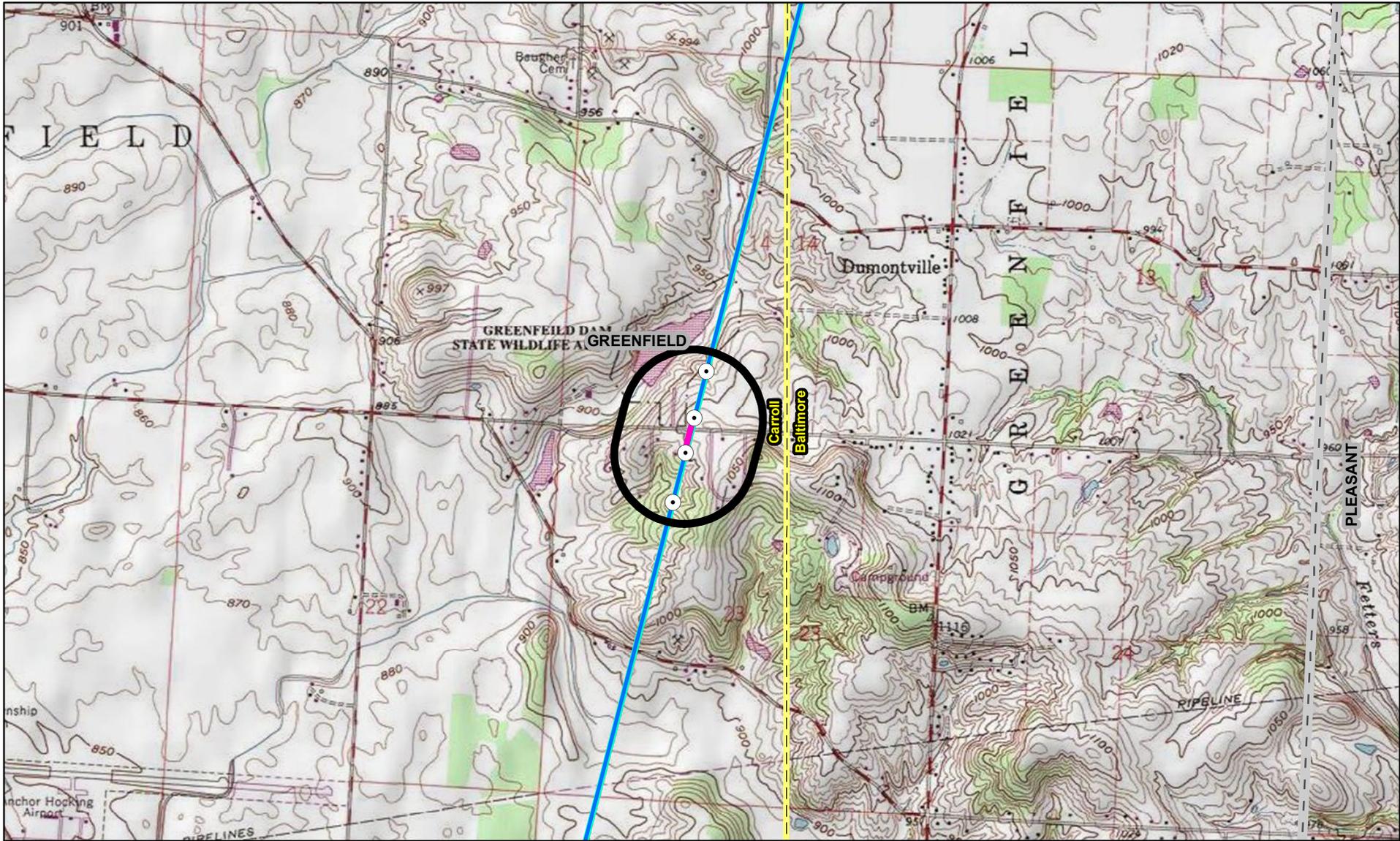
As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), coordination letters were submitted to the USFWS and ODNR requesting a review the Project and identification of areas of ecological concern. The USFWS's response email was received on April 17, 2024, (Appendix D) and did not indicate any federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project. The ODNR's response received on April 24, 2024 (Appendix D) did not indicate any known unique ecological sites, geologic features, scenic rivers, state wildlife areas, state natural preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the Project area. No further coordination is necessary for the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project.

B(10)(g) Unusual Conditions

Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

Appendix A Project Figures



-  Proposed Structure Locations
-  Project Centerline Focus
-  West Lancaster - South Baltimore - West Millersport
-  Existing Transmission Lines
-  Project Area (1000 Ft Buffer)
-  Township Boundary
-  US Topographic Lines

Data Sources: AEP, USGS 7.5'
Topographic Quadrangles
(Baltimore & Carroll)

Coordinate System
and Datum:
NAD 83 State Plane
Ohio South, Feet



January 27, 2025



**FIGURE 1 - Extent
TOPOGRAPHIC OVERVIEW**

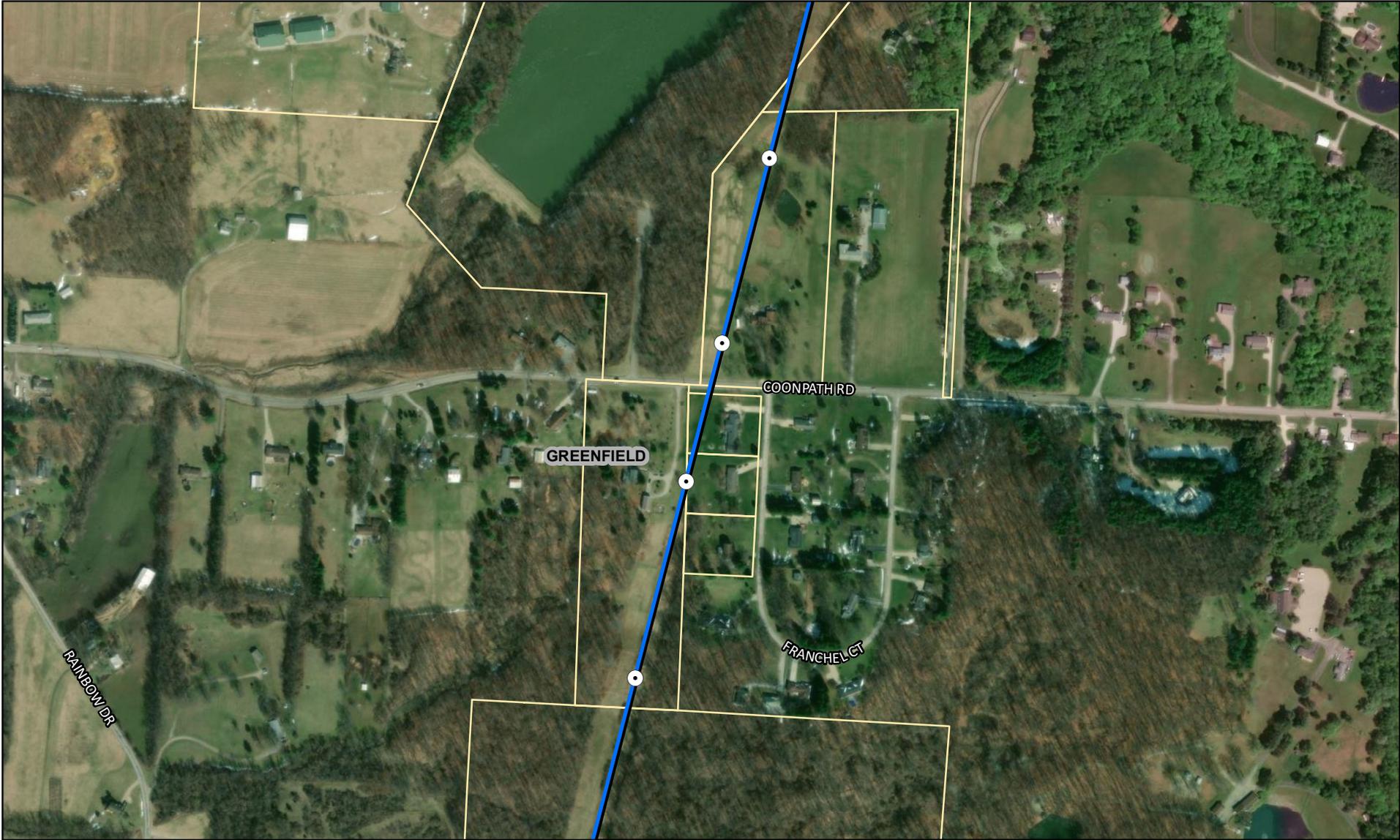


An AEP Company

Construction Notice
West Lancaster - South Baltimore
- West Millersport Project



0 1,000 2,000 3,000 4,000
Feet



-  Proposed Structure Locations
-  West Lancaster - South Baltimore - West Millersport
-  Existing Transmission Lines
-  Township Boundary
-  Project Parcel Boundary

Data Sources: AEP (2024),
ESRI Imagery (2021)

Coordinate System
and Datum:
NAD 83 State Plane
Ohio South, Feet

January 27, 2025

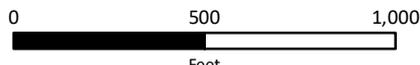


**FIGURE 2
AERIAL MAP**

Construction Notice
West Lancaster – South Baltimore
– West Millersport Project



An AEP Company



0 500 1,000
Feet

Appendix B PJM Solution

Need Number: AEP-2024-OH029

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan May 20, 2024

Previously Presented:

Solutions Meeting 03/15/2024

Needs Meeting 02/16/2024

Project Driver: Equipment Material/Condition/Performance/Risk

Specific Assumption Reference:

AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 13)

Problem Statement:

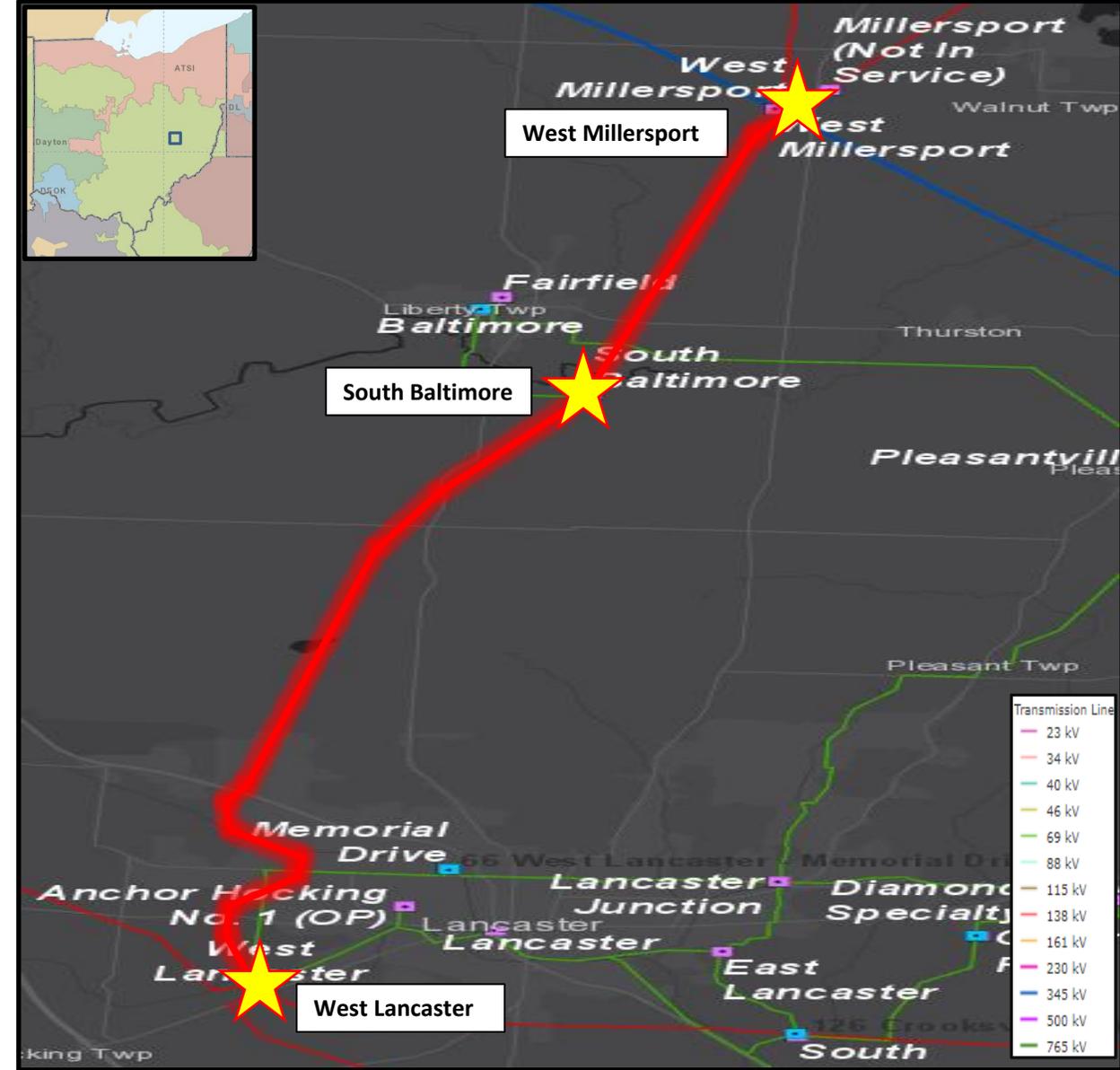
Line Name: West Lancaster - South Baltimore - West Millersport 138 kV Line

- Original Install Date (Age): 1954
- Length of Line: 14.4 miles
- Total structure count: 104 of Pole Wood & Pole Steel
 - Wood: 50 from 1950s, 7 from 1960s, 5 from 1970s, 10 from 1980s, and 3 from 1990s.
 - Steel: 29 from 2010s
- Conductor Type: 14.4 miles of 397,500 CM ACSR 30/7 (Lark) from 1954.

Open Conditions:

Currently, there are 90 ~~58~~ unique structures with at least one open condition, which relates to ~~86.5%~~ **55.7%** of the structures on the line. There are currently ~~102~~ **112** structures related open conditions including rot, woodpecker, damaged, cracked, loose, vines, split, disconnected, and insect damaged conditions. There are ~~2~~ **3** conductor related open conditions related to broken strands. There are currently ~~8~~ **8** open conditions related to broken ground lead wires. There are also 17 hardware related open conditions including broken and missing molding, damaged guy wires, missing guy guards, and burnt and broken insulators.

AEP Transmission Zone M-3 Process West Lancaster – West Millersport 138 kV



AEP Transmission Zone M-3 Process West Lancaster – West Millersport 138 kV

Need Number: AEP-2024-OH029

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan May 20, 2024

Solution:

- **West Lancaster – South Baltimore – West Millersport 138 kV :** Rebuild ~14.4 miles of the line between West Lancaster and West Millersport stations using 1033 ACSS 54/7 conductor. **Estimated Cost: \$38.7M (s3308.1)**
- **West Lancaster Station:** Replace existing bus and line risers at the station, upgrade line relays. **Estimated Cost: \$1.0M (s3308.2)**
- **South Baltimore Station:** Replace existing bus and line risers at the station, upgrade line relays. While at the station some additional site concerns such as the existing fence will be addressed. **Estimated Cost: \$0.7M (s3308.3)**

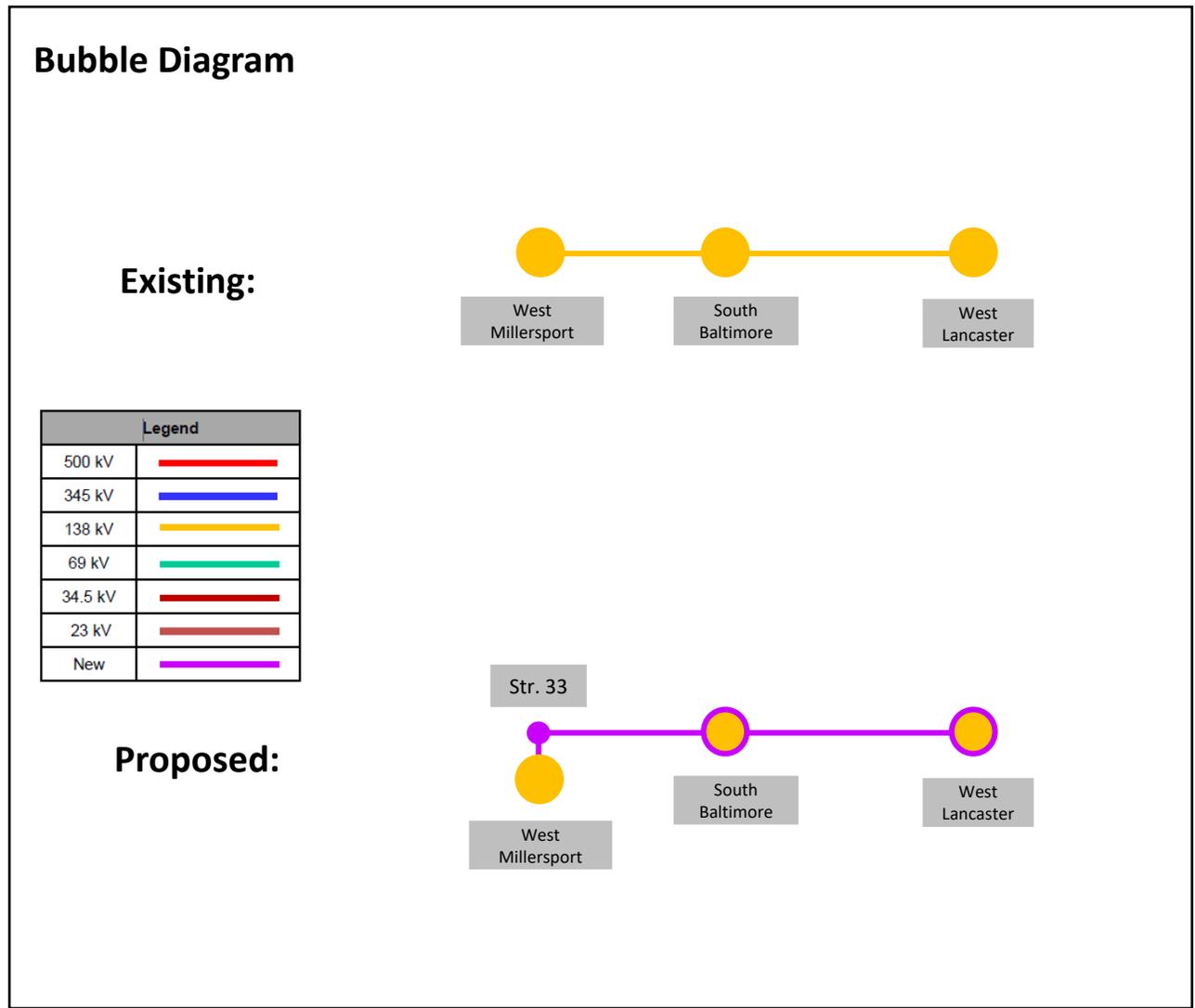
Total Estimated Cost: \$40.4M

Projected In-Service: 10/31/2026

Supplemental Project ID: s3308.1-.3

Projected Status: Scoping

Model: 2028 RTEP



WEST LANCASTER - WEST MILLERSPORT TRANSMISSION LINE REBUILD PROJECT

AEP Ohio representatives plan to strengthen the local transmission system in Fairfield County, addressing the growing power demand in the area and enhancing reliable electric service to area customers. Crews plan to begin construction late 2024 and conclude in fall 2026.

WHAT

This project involves:

- Rebuilding approximately 15 miles of 138-kilovolt transmission line from southwest Lancaster to southwest Millersport.
- Replacing deteriorating wooden poles with single steel poles.
- Upgrading the West Lancaster and South Baltimore substations.

This project requires Ohio Power Siting Board (OPSB) approval.

WHY

The project:

- Modernizes the transmission system originally built in the 1950s.
- Improves reliable electricity for area customers.
- Enhances the line's operational capacity to meet the growing area's power demand.

WHERE

The project area includes:

- Fairfield County
- Hocking, Greenfield, Liberty and Walnut townships
- The cities of Lancaster, Baltimore and Millersport

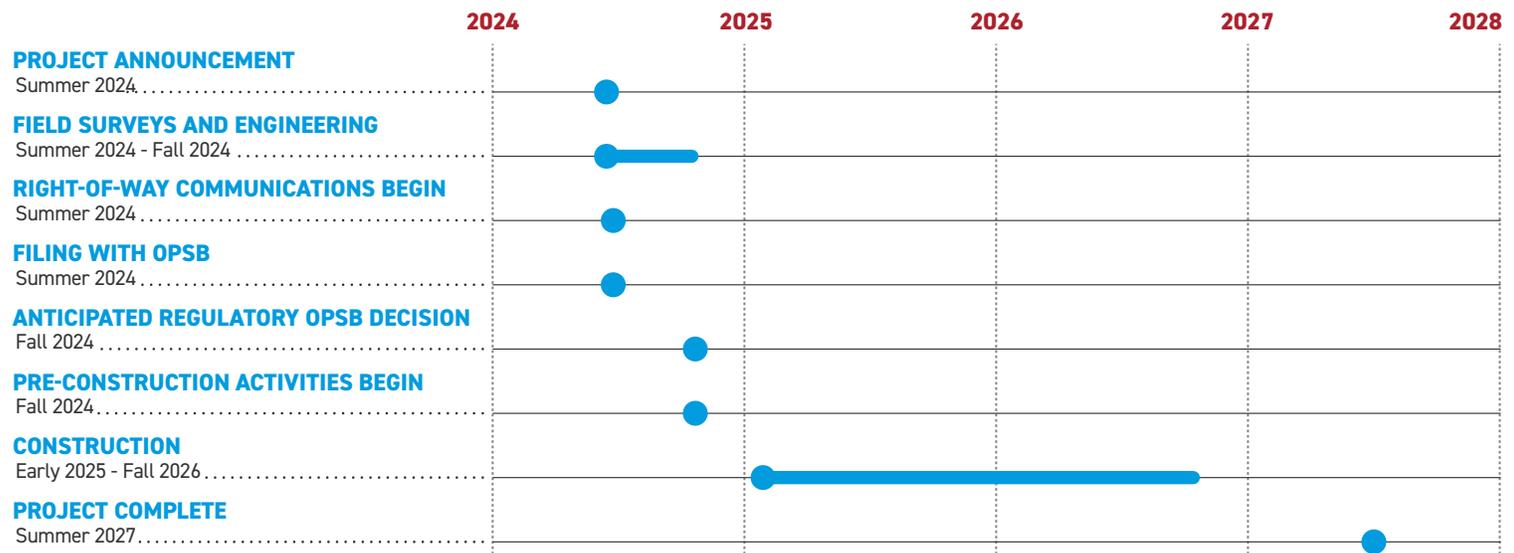
BEFORE CONSTRUCTION

AEP Ohio right-of-way representatives plan to contact affected landowners regarding surveys, field work inside easements along the transmission line route and construction access.

Some pre-construction activities include:

- Trimming or removing woody-stemmed vegetation and removing or relocating non-habitable structures from the right-of-way.
- Installing temporary gates, fencing and access roads.

PROJECT SCHEDULE



*Timeline subject to change.

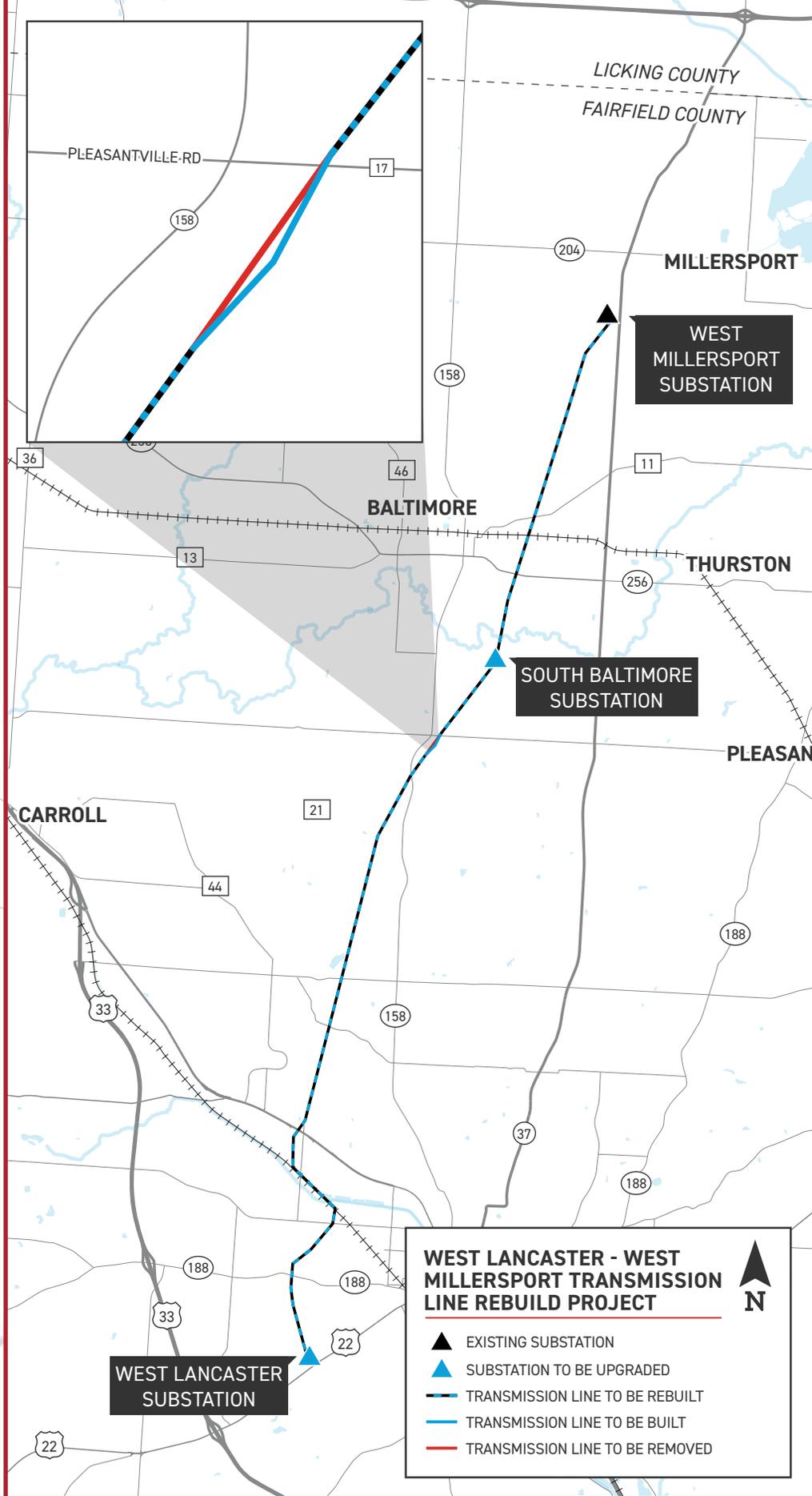
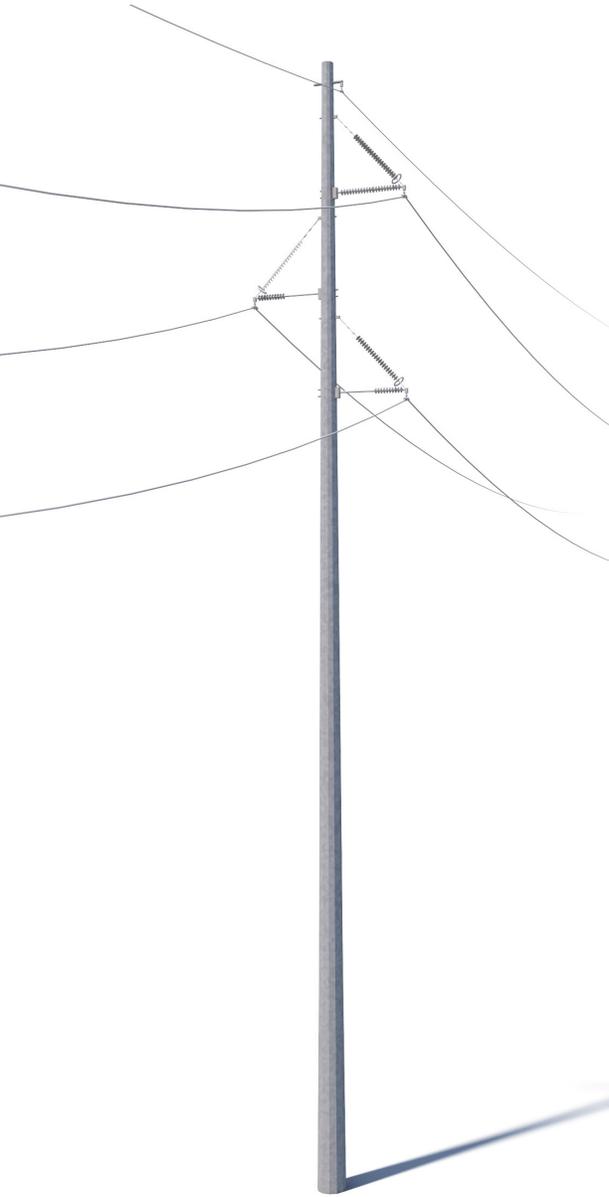
TYPICAL STRUCTURES

This project involves the use of steel single pole structures.

Typical Pole Height:
 Approximately 85 feet*

Typical Right-of-Way Width:
 Approximately 100 feet*

*Exact structure, height and right-of-way may vary.



WE VALUE YOUR INPUT. PLEASE SEND COMMENTS AND QUESTIONS TO:
 STEPHANIE EISENBERG · WSP REPRESENTING AEP OHIO
 OUTREACH@AEPOHIOTRANSMISSION.COM · 614-259-8201
 AEPOHIO.COM/LANCASTERMILLERSPORT



Appendix C Property Agreements

Line Name: West Lancaster - South Baltimore

Line No.:

Easement No.:

SUPPLEMENTAL EASEMENT AND RIGHT OF WAY

On this ___ day of _____, 2024, _____, whose address is _____, (“Grantor”), whether one or more persons, owns an interest in a tract of real property that is more particularly described lands of the Grantor, situated in the State of Ohio, Fairfield County, Greenfield Township, Tax Parcel Number _____, in that certain document, dated _____ recorded in Instrument Number _____, of the real property records of Fairfield County, Ohio, and such tract is subject to easements and rights-of-way granted in favor of AEP Ohio Transmission Company, Inc..

Ohio Power Company, a(n) Ohio corporation, a unit of American Electric Power, whose principal business address is 1 Riverside Plaza, Columbus, Ohio 43215, (“AEP”) is the current owner and holder of the rights, title, and interest, or a portion thereof, granted in or arising under that certain right of way and easement, dated _____, and recorded in Deed Volume _____, Page _____, of the official records of Fairfield County, Ohio (the “Original Easement”).

NOW, THEREFORE, in consideration of the sum of ___ and NO/100 Dollars (\$___) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby grants, conveys and warrants this Supplemental Easement and Right of Way (“Easement”) to AEP for electric transmission, distribution, and communication lines and appurtenant equipment and fixtures, being, in, on, over, under, through and across to supplement the Original Easement insofar as it encumbers such tract of real property owned by Grantor as more particularly described above.

Auditor/Key/Tax Number: _____

The location, width, and boundaries of the easement area are hereby revised, modified, and clarified to be as described and depicted on Exhibit “A”, attached hereto and made a part hereof (“Easement Area”).

The Easement is also supplemented by the addition of the following language:

AEP, its successors and assigns, are granted the right to construct, reconstruct, operate, maintain, alter, inspect and patrol (by ground or air), protect, repair, replace, renew, upgrade, relocate within the Easement Area, remove and replace poles, towers, and structures, made of wood, metal, concrete or other materials, including crossarms, guys, anchors, anchoring systems, grounding systems, underground conduits, ducts, vaults, transformers, pedestals, risers, pads, communications facilities, and all other appurtenant equipment and fixtures, and to string conductors, wires and cables. The electric facilities may consist of a variable number of towers, poles, wires, guys, anchors and associated fixtures, including the right to enlarge, and may transmit electricity of any voltage or amperage, together with the right to add to said facilities from time to time, and the right to do anything necessary, useful or convenient for the enjoyment of the Easement Area herein granted, together with the privilege of removing at any time any or all of said facilities erected on the Easement Area.

AEP and its successors and assigns, shall have the right, in AEP's reasonable discretion, to cut down, trim, and otherwise control, using herbicides or tree growth regulators, or other means, and at AEP's option, to remove from the Easement Area any and all trees, overhanging branches, vegetation, brush, including all root systems or other obstructions. AEP shall also have the right to cut down, trim, remove, and otherwise control trees situated on lands of the Grantor which adjoin the Easement Area, when in the reasonable opinion of AEP those trees may endanger the safety of, or interfere with the construction, operation or maintenance of AEP's facilities or ingress or egress to, from or along the Easement Area.

AEP and its successors and assigns are granted the right of unobstructed ingress and egress, at any and all times, on, over, across, along and upon the Easement Area, and across the adjoining lands of Grantor as may be reasonably necessary to access the Easement Area for the above referenced purposes.

In no event shall Grantor, its heirs, successors, and assigns plant or cultivate any trees or place, construct, install, erect or permit any temporary or permanent building, structure, improvement or obstruction including but not limited to, storage tanks, billboards, signs, sheds, dumpsters, light poles, water impoundments, above ground irrigation systems, swimming pools or wells, or permit any alteration of the ground elevation, over or within the Easement Area. AEP may, at Grantor's cost, remove any structure or obstruction if placed within the Easement Area and may re-grade any alterations of the ground elevation within the Easement Area. AEP shall repair or pay Grantor for actual damages to growing crops, fences, gates, field tile, drainage ways, drives, or lawns caused by AEP in the exercise of the rights herein granted.

The failure of AEP to exercise any of the rights granted herein, including but not limited to the removal of any obstructions from the Easement Area, shall not be deemed to constitute a waiver of the rights granted herein and the removal of any facilities from the Easement Area shall not be deemed to constitute a permanent abandonment or release of the rights granted herein.

Except as modified by this Supplemental Easement and Right of Way, all terms and provisions of the Original Easement and all rights arising in connection with the Original Easement shall remain

in full force and effect, and the Original Easement shall keep its priority in title as of the date of its recording. Those provisions and rights are expressly ratified, reaffirmed by and incorporated within this Supplemental Easement and Right of Way. The Original Easement along with this Supplemental Easement and Right of Way shall for all purposes function as a single instrument, however, to the extent any terms or provisions of the Original Easement conflict with, limit or are inconsistent with any term or provision of the Supplemental Easement and Right of Way, the terms and provisions of this Supplemental Easement and Right of Way shall control. Nothing herein will in any manner vary, change, modify, or restrict the rights and privileges that AEP may have acquired through any instrument other than the Original Easement or by any other means.

The terms and conditions as supplemented by this instrument, are the complete agreement, expressed or implied between the parties hereto and shall inure to the benefit of and be binding on their respective successors, assigns, heirs, executors, administrators, lessees, tenants, licensees, and legal representatives.

This instrument may be executed in counterparts, each of which will be deemed an original, but all of which taken together will constitute one and the same instrument.

Any remaining space on this page intentionally left blank. See next page(s) for signature(s).

IN WITNESS WHEREOF, the Grantor has executed this Easement effective the day, month and year first above written.

GRANTOR

By:
Title:

State of §

County of §

This instrument was acknowledged before me on the _____ day of _____, 2023, by Karen L. Osborn, Trustee of the Steiger Family Trust.

Notary Public
Print Name: _____
My Commission Expires: _____

This instrument prepared by Thomas G. St. Pierre, Associate General Counsel - Real Estate, American Electric Power Service Corporation, 1 Riverside Plaza, Columbus, OH 43215 for and on behalf of Ohio Power Company, a unit of American Electric Power.

When recorded return to: American Electric Power - Transmission Right of Way, 8600 Smiths Mill Road, New Albany, OH 43054.

Appendix D Agency Coordination

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



April 17, 2024

Project Code: 2024-0064491

Dear Olivia Speckman:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Erin Knoll".

Erin Knoll
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Eileen Wyza, ODNR-DOW



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
Tara Paciorek, Chief
2045 Morse Road – Bldg. E-2
Columbus, Ohio 43229
Phone: (614) 265-6661
Fax: (614) 267-4764

April 26, 2024

Olivia Speckman
V3 Companies
619 North Pennsylvania Street
Indianapolis, Indiana 46204

Re: 24-0500_West Lancaster - South Baltimore - West Millersport 138kV Rebuild

Project: The proposed project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

Location: The proposed project is located in Liberty, Walnut, Greenfield, and Pleasant townships, Fairfield County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data within one mile of the project area:

Cerulean Warbler (*Setophaga cerulea*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC
Great Blue Heron Rookery
Appalachian oak forest plant community
Oak-maple forest plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

The species and features listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#)." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional

malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, and the popeye shiner (*Notropis ariommus*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator



In reply, refer to
2024-FAI-60977

May 11, 2024

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project, Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received April 12, 2024, regarding the proposed West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project, Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 15.8 km (9.8 mi) West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project in Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2024). This project is related to a rebuild of the West Lancaster-South Baltimore 138kV transmission line located in the north and central part of Fairfield County, Ohio. The northern terminus is at the South Baltimore Station and the southern terminus is at the West Lancaster Station.

A literature review, visual inspection, surface collection, shovel probing, and shovel test unit excavations were completed as part of the investigations. Portions of the project area had been the subject of previous investigations. Sixteen (16) previously identified archaeological sites, Ohio Archaeological Inventory (OAI) sites #33FA0031, 33FA0100, 33FA0101, 33FA0177, 33FA0178, 33FA0180, 33FA0181, 33FA0419, 33FA1705, 33FA1706, 33FA1906, 33FA1918, 33FA1919, 33FA1930, 33FA2271, and 33FA2272, are located within or immediately adjacent the project area. These investigations reidentified seven (7) of the previously identified archaeological sites, OAI sites #33FA0180, 33FA0181, 33FA0419, 33FA1906, 33FA1918, 33FA1919, and 33FA2271; however, they did not relocate nine (9) previously recorded sites (#33FA0031, 33FA0100, 33FA0101, 33FA0177, 33FA0178, 33FA1705, 33FA1706, 33FA1930, and 33FA2272). These investigations also documented twenty-two (22) previously unrecorded archaeological sites, OAI sites #33FA2850-33FA2871. Of the twenty-nine (29) archaeological sites documented or reidentified during this survey, twenty-eight (28) archaeological sites (OAI sites #33FA0180, 33FA0181, 33FA1906, 33FA1918, 33FA1919, 33FA2271, and 33FA2850-33FA2871) were recommended not eligible for listing in the National Register of Historic Places (NRHP). No additional archaeological survey is recommended for these sites. OAI #33FA0419 was recommended for avoidance or additional investigations. Our office agrees with these recommendations.

2024-FAI-60977
May 11, 2024
Page 2

The following comments pertain to the *History/Architecture Investigations for the 15.8 km (9.8 mi) Long West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project in Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County Ohio* by Scott McIntosh (Weller & Associates, Inc., 2024).

A literature review and field survey for architectural resources were conducted as part of the investigations. A total of eighty-four (84) resources fifty (50) years of age or older were identified in the Area of Potential Effects (APE) for indirect effects. Of these, two (2) Ohio Historic Inventory (OHI) resources are recommended by Weller as eligible for listing in the NRHP under Criterion C (FAI0090105 and FAI0090210). None of the other architectural resources are identified as eligible. Our office agrees with Weller's recommendations of eligibility; therefore, we agree that there will be no adverse effect on aboveground historic resources as a result of the project.

To summarize, our office recommends avoidance or additional investigations for OAI site #33FA0419. In addition, we request that the inventory forms for OAI sites #33FA2862, 33FA2863, and 33FA2868 be completed and our office notified once the forms have been submitted. We look forward to additional coordination for the West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org or Ms. Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1102689 and 1102690



In reply, refer to
2024-FAI-60977

June 22, 2024

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Addendum 1 – West Lancaster-South Baltimore 138kV Rebuild Project, Fairfield County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received May 29, 2024, regarding the proposed West Lancaster-South Baltimore 138kV Rebuild Project, Fairfield County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Archaeological Investigations for Access Roads and Expanded Work Areas Associated with the West Lancaster-South Baltimore 138kV Rebuild Project in Fairfield County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). The purpose of this project is to address proposed access roads and expanded works areas associated with the West Lancaster-South Baltimore 138kV transmission line rebuild project that were not investigated during the initial Phase I archaeology and architecture surveys (Weller 2024; McIntosh 2024). This addendum project strictly addresses potential impacts to archaeological resources, as architectural resources within the Area of Potential Effects (APE) were addressed through the initial survey (McIntosh 2024).

A literature review, visual inspection, surface collection, and shovel test unit excavations were completed as part of the addendum investigations. Portions of the project area had been the subject of previous investigations through the initial Phase I survey (Weller 2024). There were three (3) previously documented archaeological sites, Ohio Archaeological Inventory (OAI) sites 33FA0180, 33FA0419, and 33FA1720, located within the addendum project area. OAI site 33FA0180 was documented in relation to a landowner's collection and does not have well-defined boundaries. These investigations did not relocate OAI site 33FA0180 within the addendum project area and no further archaeological survey is recommended in relation to this site.

A previous coordination letter issued for the West Lancaster-South Baltimore 138kV Rebuild Project

(dated May 11, 2024) recommended avoidance or additional investigations for OAI site 33FA0419. The known boundaries of OAI site 33FA0419 are located entirely within one of the proposed expanded work areas, which is roughly bounded by Ety Road NW to the east, the Hocking River to the southwest, and a railroad to the northeast. Per the submission, Phase II assessment work for OAI site 33FA0419 is actively underway and the entirety of this expanded work area will be addressed through those investigations. Likewise, per the submission, OAI site 33FA1720 is located within this expanded work area and will be addressed concurrently with the Phase II investigations for site 33FA0419. Our office requests the opportunity to review and comment on the plan for investigations within this expanded work area, as it relates to OAI site 33FA1720 and the Phase II assessment of OAI site 33FA0419.

Finally, these investigations identified two (2) new OAI sites: 33FA2906 and 33FA2907. Both archaeological sites are precontact-era isolated find spots that lacked any diagnostic materials. Neither site was recommended eligible for listing on the National Register of Historic Places (NRHP) and our office agrees with this recommendation. No additional archaeological survey is recommended within the tested portions of the addendum project area.

In summary, our office agrees that no additional archaeological investigation is needed for OAI sites 33FA0180, 33FA2906, and 33FA2907; however, we continue to recommend avoidance or additional investigations for OAI site 33FA0419. We also recommend that the entirety of the expanded work area, which contains a portion of OAI site 33FA1720, as well as OAI site 33FA0419, be investigated. Our office looks forward to additional coordination regarding these two archaeological sites and the West Lancaster-South Baltimore 138kV Rebuild Project. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1103377

Appendix E Ecological Resources Inventory Report

**WEST LANCASTER – SOUTH
BALTIMORE – WEST MILLERSPORT
138kV REBUILD
ECOLOGICAL REPORT**



PROJECT SITE:

**Southwest of OH-204 and OH-37 to
Northeast of US Highway 22 and OH-57
Fairfield County, Ohio**

PREPARED FOR:

AEP Ohio Transmission Company, Inc.
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BOUNDLESS ENERGY™

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EXECUTIVE SUMMARY

V3 Companies, Ltd. (V3), performed an ecological survey and report for The West Lancaster – South Baltimore – West Millersport 138kv Transmission Line Rebuild project on March 27 and 28, 2024. The project begins at West Millersport Station, southwest of OH-204 and OH-37, Millersport, OH, and extends approximately 4.6 mile southwest to South Baltimore Station (Structures 33 to 2) and continues approximately 9.8 miles southwest to West Lancaster Station, northeast of US Highway 22 and OH-57 (Structures 71 to 1) in Fairfield County, Ohio (SITE). The survey area includes the 14.4-mile-long transmission line and a 100-foot right of way corridor. V3 reached the following conclusions based on review of available and reasonably ascertainable federal, state, and local resources, and a SITE inspection conducted on the date referenced above.

- Seventeen streams were identified on-SITE, ST-31PER, ST-25-PER, ST-15-PER, Walnut Creek, ST-2-PER, ST-68-INT, ST-63-EPH, ST-55-INT, ST-53-INT, ST-48-EPH, ST-44-INT, ST-44-EPH, ST-42-INT, Hocking River, ST-14-PER, ST-11-INT and Hunters Run. All streams, except ST-63-EPH and ST-48-EPH, appear to be relatively permanent waters that will likely qualify as federally jurisdictional “Waters of the U.S.”. Additionally, Hocking River is designated by the U.S. Army Corps of Engineers (USACE) as a Section 10 Navigable Waterway 79 miles upstream of the confluence of the Ohio River.
- Eight wetlands were identified on-SITE, WL-12-PEM, WL-10-PEM, WL-5-PEM, WL-68-PEM, WL-60-PEM, WL-50-PEM, and WL-41-PEM. Wetlands WL-68-PEM, WL-41-PEM and WL-18-PEM appear to have a connection to relatively permanent waters, therefore, will likely qualify as a “Waters of the U.S.”. All the other wetlands did not appear to have direct connection to relatively permanent waters and are likely to be considered isolated.
- Two stormwater ponds were identified on-SITE. One potential stormwater pond was noted within an inaccessible residential area. The ponds appear to be isolated man-made features.
- An official species list obtained from the U.S. Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) website indicated that the SITE is within the ranges of the federally endangered Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), the federally threatened eastern massasauga (*Sistrurus catenatus*) and round hickorynut (*Obovaria subrotunda*), the proposed endangered salamander Mussel (*Simpsonaias ambigua*) and the candidate for listing monarch butterfly (*Danaus plexippus*). The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 1 October to 31 March. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.
- Correspondence with the Ohio Department of Natural Resources (ODNR) indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranthus fasciolaris*), a Great Blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Potentially suitable habitat for the kidneyshell was observed within the SITE. The documented plant communities are anticipated to occur within forested areas adjacent to the SITE. The ODNR Division of Fish and Wildlife stated that the SITE is also within the range of seven endangered, threaten, and rare (ETR) species. The ODNR stated that the project is not likely to impact these species if habitat is not impacted and gave recommendations to avoid and minimize impacts to these species and their habitats.



CHAPTER 1 INTRODUCTION

This report has been prepared solely in accordance with an agreement between American Electric Power (“CLIENT”) and V3 Companies (“V3”), Ltd.

The services performed by V3 have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practices relating to this type of engagement.

This report is solely for the use of CLIENT and was prepared based upon an understanding of CLIENT’s specific objective(s) and based upon information obtained by V3 in furtherance of CLIENT’s specific objective(s). Any reliance of this report by third parties shall be at such third party’s sole risk as this report may not contain, or be based upon, sufficient information for purposes of other parties, for their objectives, or for other uses. This report shall only be presented in full and may not be used to support any other objectives than those for CLIENT as set out in the report, except where written approval and consent are expressly provided by CLIENT and V3.

1.1 INTRODUCTION

The purpose of this investigation was to conduct an ecological survey and report of the SITE to evaluate potential land development permitting requirements regarding natural resources. In this report, V3 provides a detailed description of the information reviewed and collected as part of the scope of work for this project. V3 summarizes the jurisdictional framework applicable to this project, provides a desktop review of relevant and publicly available documents, and details information collected during the SITE reconnaissance including a wetlands determination, an evaluation of the potential presence of other natural resources within the SITE boundary, and a discussion of endangered, threatened, and rare (ETR) species and habitat. The Conclusions section summarizes V3’s findings, addresses potential areas of concern and permitting, regulatory, and other relevant issues.



CHAPTER 2 JURISDICTIONAL RESOURCES

2.1 WETLANDS

Wetlands offer a variety of functions and values that may include, but are not limited to, groundwater recharge/discharge, flood flow alteration, sediment/toxicant retention, and fish and wildlife habitat. Because of the perceived functions and values of wetlands, USACE developed the Wetlands Delineation Manual, (*1987 Manual*)¹ to identify wetlands.

Wetlands are defined in the *1987 Manual* as, “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”² The *1987 Manual* outlines the protocol for distinguishing wetland areas from “upland” areas. Wetland areas are delineated according to three primary criteria: vegetation, soil, and hydrology. An area is determined to qualify as a wetland if it meets the following “general diagnostic environmental characteristics:”

- Hydrophytic vegetation
- Hydrology
- Hydric Soil

¹ USACE. Waterways Experiment Station. Wetlands Research Program. “Corps of Engineers Wetlands Delineation Manual.” Vicksburg, MS: Environmental Laboratory, 1987



CHAPTER 3 DESKTOP REVIEW

V3 reviewed applicable, readily available, and accessible historical information for the potential presence of wetlands, “Waters of the U.S.,” and other natural resources.

3.1 UNITED STATES GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLE MAP

A USGS 7.5-Minute Quadrangle map displays contour lines to portray the shape and elevation of the land surface. Quadrangle maps render the three-dimensional changes in elevation of the terrain on a two-dimensional surface. The maps usually portray both manmade and natural topographic features. Although they show lakes, rivers, various surface water drainage trends, vegetation, etc., they typically do not provide the level of detail needed for accurate evaluation of wetlands. However, the existence of these features may suggest the potential presence of wetlands.

The SITE is situated in the Millersport, Baltimore, Carroll, and Amanda, Ohio USGS 7.5-Minute Quadrangle Map. Section, Township and Range information is described in **Table 3-1**. V3 evaluated the topography and concluded that the SITE elevation ranges from approximately 820 to 1100 feet above mean sea level (AMSL). Seven aquatic features are mapped within the SITE area, Hocking River, Walnut Creek, Abandoned Ohio Canal, and four unnamed streams (**Figure 1**).

Table 3-1: Section, Township, and Range Description

Section	Township, Range	Structure Location
6, 7, 18, 19	16 North, 18 West	33 to 12
24, 25, 36	16 North, 19 West	11 to 63
1, 2, 11, 14, 23, 26, 27, 34, 35	15 North, 19 West	62 to 16
2, 3, 10, 11	14 North, 19 West	15 to 1

3.2 NATIONAL WETLANDS INVENTORY MAP

National Wetlands Inventory (NWI) maps were developed to meet a USFWS mandate to map the wetland and deepwater habitats of the U.S. These maps were developed using high altitude aerial photographs and USGS Quadrangle maps as a topographic base. Indicators that exhibited pre-determined wetland characteristics, visible in the photographs, were identified according to a detailed classification system. The NWI map retains some of the detail of the Quadrangle map; however, it is used primarily for demonstration of wetland areas identified by the agency. The maps are accurate to a scale of 1:24,000. In general, the NWI information requires field verification.

NWI data is shown projected over aerial imagery in **Figure 2**. There are 14 NWI features are mapped within the SITE area and described in **Table 3-2**. The presence of NWI features mapped partially or fully within the SITE area suggests the potential presence of wetlands or other regulated aquatic features on-SITE.



Table 3-2: NWI Classification Description

Symbol	Description	Nearest Structure
PEM1A	Palustrine, Emergent, Persistent, Temporarily Flooded	60 South
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	60 South
PUBGx	Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated	32 South
R2UBG	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Intermittently Exposed	18, 15, 1 South
R2UBH	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded	25 North
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	31 North
		3, 2 North
		55 South
		53 South
		48 South
		44 South
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	11 South
		15 North
		3 North

3.3 FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) was developed in 1979 to reform disaster relief and recovery, civil defense, and to prepare and mitigate for natural hazards. The Mitigation Division of FEMA manages the National Flood Insurance Program which provides guidance on how to lessen the impact of disasters on communities through flood insurance, floodplain management, and flood hazard mapping. Proper floodplain management has the ability to minimize the extent of flooding and flood damage and improve stormwater quality by reducing stormwater velocities and erosion. The one percent annual chance flood (100-year flood) boundary must be kept free of encroachment as the national standard for the program.

V3 reviewed digital National Flood Hazard Zone data for Fairfield County, Ohio (**Figure 2**). Various portions of the site are mapped within the 100-year floodway, Flood Zone X, A, and AE (**Table 3-3**).

Table 3-3: Flood Zone Description

Flood Zone	Associated Stream	Nearest Structure
AE	Walnut Creek	4 to 2 North
Floodway		3 North
AE	Hocking River	21 to 19 South
Floodway		19 South
AE	ST-14-PER	15 South
Floodway		
AE	Hunters Run	2 to 1 South
Floodway		1 South

3.4 UNITED STATES DEPARTMENT OF AGRICULTURE SOIL SURVEY

V3 reviewed the soils mapped on-SITE using the Natural Resource Conservation Service (NRCS) digital soil survey data for Fairfield County, Ohio. This data is projected over aerial photography, illustrating distinct soil map unit boundaries, in **Figure 3**.



Table 3-4: Soil Survey Description

Soil Map Unit	Description	Hydric within Fairfield County
Ag	Aetna silt loam, occasionally flooded	No
Ah	Aetna silt loam, fan, occasionally flooded	No
AmB	Amanda silt loam, 2 to 6 percent slopes	No
AmB2	Amanda silt loam, 2 to 6 percent slopes, eroded	No
AmC2	Amanda silt loam, 6 to 12 percent slopes, eroded	No
AmD2	Amanda silt loam, 12 to 20 percent slopes, eroded	No
AmE2	Amanda silt loam, 20 to 35 percent slopes, eroded	No
AoC3	Amanda silty clay loam, 6 to 12 percent slopes, severely eroded	No
ApC2	Amanda-Loudonville complex, 6 to 12 percent slopes, eroded	No
ApD2	Amanda-Loudonville complex, 12 to 20 percent slopes, eroded	No
BeA	Bennington silt loam, 0 to 2 percent slopes	No
BeB	Bennington silt loam, 2 to 6 percent slopes	No
Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	No
Cen1B2	Centerburg silt loam, 2 to 6 percent slopes, eroded	No
Cen1C2	Centerburg silt loam, 6 to 12 percent slopes, eroded	No
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	No
CsA	Canal silt loam, 0 to 2 percent slopes	No
Ee	Eel silt loam, gravelly substratum, occasionally flooded	No
FmA	Fox silt loam, 0 to 2 percent slopes	No
FmB	Fox silt loam, 2 to 6 percent slopes	No
GaB	Gallman silt loam, loamy substratum, 2 to 6 percent slopes	No
GnB	Glenford silt loam, 3 to 8 percent slopes	No
LtE	Loudonville-Steinsburg complex, 20 to 35 percent slopes	No
Ma	Marengo clay loam	Yes
Mb	Marengo silt loam, overwash	Yes
Mns3A	Minster silty clay loam, 0 to 1 percent slopes	Yes
Pb	Patton silty clay loam, 0 to 2 percent slopes, rarely flooded	Yes
Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Yes
SkA	Sleeth silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	No
ThA	Thackery silt loam, 0 to 2 percent slopes	No
Ud	Udorthents, loamy	No
UoC	Urban land-Amanda complex, 2 to 12 percent slopes	No
UrB	Urban land-Bennington complex, 0 to 6 percent slopes	No
WdA	Wea silt loam, 0 to 2 percent slopes	No

Five hydric soil unit is situated within the SITE. Marengo clay load (Ma), Marengo silt loam, overwash (Mb), Minister silty clay loam, 0 to 1 percent slopes (Mns3A), Patton silty clay loam, 0 to 2 percent slopes, rarely flooded (Pb), and Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes (Pe), are considered hydric within Fairfield County, Ohio. Soils are considered hydric if more than 50 percent of the soil contains hydric components according to the NRCS Web Soil Survey. The presence of hydric soil units within the SITE area suggests appropriate wetland soils are located on-SITE.

3.5 ENDANGERED, THREATENED, AND RARE SPECIES EVALUATION

An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), the federally proposed endangered tricolored bat (*Perimyotis subflavus*) and salamander mussel (*Simpsonaias ambigua*); the federally threatened eastern massasaunga rattlesnake



(*Sistrurus catenatus*) and round hickorynut (*Obovaria subrotunda*), and the monarch butterfly (*Danaus plexippus*), a candidate for listing under the Endangered Species Act. The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species. The USFWS stated that if tree clearing cannot be avoided, then seasonal clearing shall be done to avoid adverse effects to the Indiana bats and the northern long-eared bats. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.

Correspondence with the ODNR indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranthus fasciolaris*), a Great blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Additionally, the ODNR Division of Fish and Wildlife stated that the SITE is within the range of seven ETR species (**Table 3-5**).

ODNR recommended a desktop habitat assessment followed by a field assessment, if needed, to identify if potential bat hibernacula are present within the Project area. V3 completed a desktop assessment including data on known abandoned or active mines and locations known or suspected of karst geology. The desktop assessment identified no karst features or mine openings within 0.25 mile of the Project area. Further, no suitable bat hibernacula were observed during the field reconnaissance.

Based on the documentation referenced above, additional correspondence with the agencies does not appear to be warranted at this time. If federal permitting or federal financing will be used in future development, additional coordination may be necessary. Copies of agency correspondence can be referenced in **Appendix A**.



Table 3-5: ETR Species Table

Scientific Name	Common Name	State Listed Status	Federally Listed Status	Typical Habitat Description	Habitat Observed In Survey Area	Avoidance Dates	Agency Comment (Appendix A)	Potential Impacts
Mussels								
<i>Ptychobranchnus fasciolaris</i>	Kidneyshell	Special Concern	N/A	Medium to large rivers in gravel	Yes	N/A	ODNR - Proposed project not likely to impact this species if no in-water work proposed.	No –work in habitat not proposed
Fishes								
<i>Ichthyomyzon fossor</i>	Northern brook lamprey	Endangered	N/A	Perennial streams	Yes	15 March to 30 June	ODNR - If no in-water work is proposed in a perennial stream, this project is not likely to impact these species	No –work in habitat not proposed
<i>Notropis ariommus</i>	Popeye shiner	Endangered	N/A	Perennial streams	Yes	15 March to 30 June		No –work in habitat not proposed
Birds								
<i>Setophaga cerulea</i>	Cerulean Warbler	Special Concern	N/A	Deciduous forests	No	N/A	ODNR	No
<i>Circus hudsonius</i>	Northern Harrier	Endangered	N/A	Breed and hunt in large marshes and grasslands. Nests on the ground atop mounds	Yes	15 April to 31 July	ODNR - If the habitat will not be impacted, this project is not likely to impact this species.	TBD - If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31.



Mammals								
<i>Myotis sodalis</i>	Indiana bat	Endangered	Endangered	During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees	No	1 April to 30 September	ODNR/USFWS – Cutting of trees is recommended between 1 October and 31 March. If seasonal tree cutting is not possible, a mist net survey or acoustic survey may be conducted by an approved surveyor between 1 June and 15 August.	No - Impacts are avoided with winter tree clearing. If winter tree clearing is not feasible, presence/absence surveys may be needed.
<i>Myotis septentrionalis</i>	Northern long-eared bat	Endangered	Endangered		No		ODNR - If a habitat assessment finds that potential hibernacula are present within 0.25 mile of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the Division of Wildlife (DOW) recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.	
<i>Myotis lucifugus</i>	Little brown bat	Endangered	Endangered		No			
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	N/A		No			



CHAPTER 4 SITE RECONNAISSANCE

4.1 METHODOLOGY

V3 conducted a field investigation at the SITE on March 27 and 28, 2024. During this investigation, V3 noted the presumed land use of the SITE and surrounding area, and evaluated the SITE for the potential presence of wetlands, “Waters of the U.S.,” and natural resources using the findings of the desktop review and field observations. Photographs were taken during the field investigation and are provided in **Appendix B**.

V3 used the Routine Determination Method (RDM) with an established baseline and transects as described in the *1987 Manual* for typical sites over five acres. V3 recorded data from a number of data points (DP) along the transect as a function of diversity of vegetation, property size, soil types, habitat variability, and other SITE features as deemed appropriate by V3. Where evidence of a wetland was suspected, three wetland criteria were applied to determine if the area in question was representative of a wetland using the methodology set forth by USACE. More specifically, V3 visually examined and recorded the dominant vegetation, recorded soil properties such as texture and color using the Munsell Soil Color Chart (Munsell Color Chart), excavated soil pits, and evaluated the primary and secondary hydrologic indicators.

If all three criteria were met, i.e. vegetation, soil properties, and hydrologic indicators, a second DP was established adjacent to the wetland DP in an area outside of the presumed wetland boundary for the purpose of delineating between the wetland and non-wetland areas. Once delineated, V3 continued the RDM to evaluate the remainder of the SITE.

4.2 SITE AND ADJACENT PROPERTY LAND USE

The 14.4-mile-long corridor consists of residential, commercial, fallow, and agricultural use land, woodland, and existing substations. Adjacent land use consists of residential, commercial, fallow, and agricultural land, and woodland.

4.3 WETLAND SUMMARY

Eight wetlands were identified during this investigation based upon the methodology set forth in the *1987 Manual* and the *Midwest Regional Supplement*. Information that V3 collected at each DP on March 27 and 28, 2024 is described in the following section. This information is summarized on the forms provided in **Appendix C**. An overall SITE delineation map showing placement of the DPs is included as **Figure 4**.

Table 6-1: Delineated Wetlands Identified within the Survey Area

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Proposed Impacts	
	Latitude	Longitude				Score	Category	Temporary Matting Area (acre)	Permanent Impact Area (acre)
WL-12-PEM	39.84744	-82.58657	Yes	PEM	0.06	43.5	Modified 2	TBD	0
WL-10-PEM	39.84171	-82.58895	Yes	PEM	0.17	2	1	TBD	0
WL-5-PEM	39.83423	-82.59153	Yes	PEM	0.11	32	1 or 2 gray zone	TBD	0



WL-68-PEM	39.82181	-82.59758	No	PEM	0.10	31	1 or 2 gray zone	TBD	0
WL-60-PEM	39.80855	-82.61096	Yes	PEM	1.91	39	Modified 2	TBD	0
WL-50-PEM	39.79325	-82.62197	Yes	PEM	0.03	32	1 or 2 gray zone	TBD	0
WL-41-PEM	39.77470	-82.62809	No	PEM	0.40	32.5	1 or 2 gray zone	TBD	0
WL-18-PEM	39.72906	-82.63356	No	PEM	0.05	40	Modified 2	TBD	0

4.3.1 Wetland WL-12-PEM – (0.06-acre PEM on-SITE)

Wetland WL-12-PEM was situated adjacent to Structure 12 and consisted of 0.06 acres of palustrine, emergent wetland (PEM) on-SITE. Wetland WL-12-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

DP WL-12

This DP was collected in the northern portion of Wetland WL-12-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of rice cut grass (*Leersia oryzoides*, OBL., 80%) and Virginia wild rye (*Elymus virginicus*, FACW, 20%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-12

This DP was collected in the upland area adjacent to DP WL-12. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of multiflora rose (*Rosa multiflora*, FACU 8%), Allegheny blackberry (*Rubus alleghensis*, FACU, 2%), Canadian goldenrod (*Solidago canadensis*, FACU, 75%), and Indian-hemp (*Apocynum cannabinum*, FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.3.2 Wetland WL-10-PEM – (0.17-acre PEM on-SITE)

Wetland WL-10-PEM was situated adjacent to Structure 10 and consisted of 0.17 acres of PEM on-SITE. Wetland WL-10-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

DP WL-10

This DP was collected in the west portion of Wetland WL-10-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of Virginia wild rye (FACW, 25%) and garden yellow-rocket (*Barbarea vulgaris*, FAC, 15%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-10

This DP was collected in the upland area adjacent to DP WL-10. This area met hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify



as a wetland. The dominant vegetation for each stratum present consisted of common wheat (*Triticum aestivum*, UPL, 80%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

4.3.3 Wetland WL-5-PEM – (0.11-acre PEM on-SITE)

Wetland WL-5-PEM was situated adjacent to Structure 5 and consisted of 0.11 acres PEM on-SITE. Wetland WL-5-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

DP WL-5

This DP was collected in the northwest portion of Wetland WL-5-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of dark-green bulrush (*Scirpus atrovirens*, OBL, 60%), and Indian-hemp (FAC, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-5

This DP was collected in the upland area adjacent to DP WL-5. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), red maple (*Acer rubrum*, FAC, 5%), Canadian goldenrod (FACU, 50%), tall false rye grass (*Schedonorus arundinaceus*, FACU, 30%), and deer tongue panic grass (*Dichanthelium clandestinum*, FACW, 20%).

4.3.4 Wetland WL-68-PEM – (0.10-acre PEM on-SITE)

Wetland WL-68-PEM was situated adjacent to Structure 68 and consisted of 0.10 acres of PEM on-SITE. Wetland WL-68-PEM appears to continue east off-SITE and did appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

DP WL-68

This DP was collected in the north portion of Wetland WL-68-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common rush (OBL, 40%) and deer tongue panic grass (FACW, 30%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-68

This DP was collected in the upland area adjacent to DP WL-68. This area met x criteria but did not meet x criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 10%), path rush (*Juncus tenuis*, FAC, 50%), Canadian goldenrod (FACU, 20%), and white heath aster (*Symphotrichum ericoides*, FACU, 10%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

4.3.5 Wetland WL-60-PEM – (1.91-acre PEM on-SITE)

Wetland WL-60-PEM was situated adjacent to Structure 60 and consisted of 1.91 acres of PEM on-site. Wetland WL-60-PEM appears to continue east and west off-SITE and did appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”



DP WL-60

This DP was collected in the northeast portion of Wetland WL-60-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (*Juncus effusus*, OBL, 45%), and reed canary grass (*Phalaris arundinacea*, FACW, 25%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-60

This DP was collected in the upland area adjacent to DP WL-60. This area met the hydric soil criterion but did not meet the hydrophytic vegetation or hydrology criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 55%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

DP WL-60A

This DP was collected in the southwest portion of Wetland WL-60-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (OBL, 20%) and dark-green bulrush (OBL, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), crayfish burrows (C8), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-60A

This DP was collected in the upland area adjacent to DP WL-60A. This area met hydric soil and hydrology criteria but did not meet the hydric vegetation criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Canadian goldenrod (FACU, 70%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2) and saturation (A3).

4.3.6 Wetland WL-50-PEM – (0.03-acre PEM)

Wetland WL-50-PEM was situated adjacent to Structure 50 and consisted of 0.03 acres of PEM. Wetland WL-50-PEM did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

DP WL-50

This DP was collected in the central portion of Wetland WL-50-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common fox sedge (*Carex vulpinoidea*, FACW, 100%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-50

This DP was collected in the upland area adjacent to DP WL-50. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (*Setaria faberi*, FACU, 70%) and corn residue (*Zea mays*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



4.3.7 Wetland WL-41-PEM – (0.40-acre PEM on-SITE)

Wetland WL-41-PEM was situated adjacent to Structure 41 and consisted of 0.40 acres of PEM on-SITE. Wetland WL-41-PEM appears to continue west and did appear to have a hydrologic connection with a federally jurisdictional “Waters of the U.S.”

DP WL-41

This DP was collected in the north portion of Wetland WL-41-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), white vervain (*Verbena urticifolia*, FAC, 20%), and reed canary grass (FACW, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-41

This DP was collected in the upland area adjacent to DP WL-41. This area met hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 15%) and tall false rye grass (FACU, 70%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

DP WL-41A

This DP was collected in the south portion of Wetland WL-41-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common fox sedge (FACW, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-41A

This DP was collected in the upland area adjacent to DP WL-41A. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (FACU, 60%) No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.3.8 Wetland WL-8-PEM – (0.05-acre PEM)

Wetland WL-18-PEM was situated adjacent to Structure 18 and consisted of 0.05 acres of PEM. Wetland WL-18-PEM did appear to have a hydrologic connection with a federally jurisdictional “Waters of the U.S.”

DP WL-18

This DP was collected in the southern portion of Wetland WL-18-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 98%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

DP UPL-18

This DP was collected in the upland area adjacent to DPWL-18. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Northern catalpa (*Catalpa speciosa*, FACU, 50%),



multiflora rose (FACU, 15%), and Virginia wild rye (FACW, 50%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.4 DATA POINT SUMMARY

Below is a description of the information collected at each additional DP during the March 27 and 28, 2024 field investigation that was not associated with an identified wetland area. The purpose of collecting these DPs was to describe the remaining characteristics of the SITE. Information that was collected at each DP is summarized on the forms provided in **Appendix C**. Their placement is depicted in **Figure 4**.

DP 33A

This DP was collected north of Structure 33 at West Millersport Station. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 50%) and Canadian goldenrod (FACU, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 33

This DP was collected south of Structure 33 at West Millersport Station. This area met the hydric vegetation criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of garden yellow-rocket (FAC, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 31

This DP was collected north of Structure 31. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of purple dead-nettle (*Lamium purpureum*, UPL, 48%) and corn residue (UPL, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 28

This DP was collected north of Structure 28. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (*Glycine max*, UPL, 60). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 25

This DP was collected north of Structure 25. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), poison hemlock (*Conium maculatum*, FACW, 30%), purple dead-nettle (UPL, 30%), and yellow nut sedge (*Cyperus esculentus*, FACW, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 22

This DP was collected north of Structure 22. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 40%), garden yellow-rocket (FAC, 20%), and common chickweed (*Stellaria media*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



DP 19

This DP was collected south of Structure 19. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 70%) and common chickweed (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 16

This DP was collected south of Structure 16. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 45%) and Indian-hemp (FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 14

This DP was collected north of Structure 14. This area met the hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 60%) and annual ryegrass (*Lolium multiflorum*, UPL, 30%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

DP 12

This DP was collected south of Structure 12. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (*Pyrus calleryana*, UPL, 40%), black elder (*Sambucus nigra*, FACU, 15%), crow garlic (*Allium vineale*, FACU, 30%), and Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 10

This DP was collected south of Structure 10. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red osier dogwood (*Cornus alba*, FACW, 30%), Allegheny blackberry (FACU, 20%), and Canadian goldenrod (FACU, 40%). The soil profile met the depleted matrix (F3) indicator for hydric soil. No indicators of wetland hydrology were observed.

DP 8

This DP was collected north of Structure 8. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of common wheat (UPL, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 6

This DP was collected north of Structure 6. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of slough sedge (*Carex atherodes*, OBL, 100%). This DP was in a residential yard, therefore there was no soil pit taken. No indicators of wetland hydrology were observed.



DP 4

This DP was collected north of Structure 4. This area met the hydrophytic vegetation and wetland hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (30%, OBL), Canadian goldenrod (25%, FACU), and tall false rye grass (20%, FACU). No indicators of hydric soils were observed. Evidence of wetland hydrology included high water table (A2) and saturation (A3).

DP 4A

This DP was collected south of Structure 4. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 100%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 3

This DP was collected north of Structure 3. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of yellow ironweed (*Verbesina alternifolia*, FACW, 25%), Canadian goldenrod (FACW, 20%), and stinging nettle (*Urtica dioica*, FACW, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

DP 2

This DP was north of Structure 2. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 30%), rape (*Brassica rapa*, FACW, 15%), purple dead-nettle (UPL, 10%), and butterweed (*Packera glabella*, FACW, 10%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 71

This DP was collected north of Structure 71. This area met the hydrology criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red osier dogwood (FACW, 30%), Allegheny blackberry (FACU, 15%), Canadian goldenrod (FACU, 25%), and purple leaf willowherb (*Epilobium coloratum*, OBL, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included high water table (A2), saturation (A3), and geomorphic position (D2).

DP 70

This DP was collected north of Structure 70. This area met the hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (FACU, 35%), yellow bristle grass (*Setaria pumila*, FAC, 35%), and Kentucky blue grass (*Poa pratensis*, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

DP 68

This DP was collected north of Structure 68. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each



stratum present consisted of Allegheny blackberry (FACU, 30%), autumn olive (*Elaeagnus umbellata*, UPL, 105), Kentucky blue grass (FAC, 60%), and common dandelion (*Taraxacum officinale*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 63

This DP was collected north of Structure 63. This area met hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 100%) This DP was in a residential yard, therefore there was no soil pit taken. No indicators of wetland hydrology were observed.

DP 62A

This DP was collected northwest of Structure 62. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red maple (*Acer rubrum*, FAC, 30%), Amur honeysuckle (*Lonicera maackii*, UPL, 15%), Narrow-Leaf Cat-Tail (*Typha angustifolia*, OBL, 50%), garden yellow-rocket (FAC, 20%), and Kentucky blue grass (FAC, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included saturation (A3) and FAC-neutral test (D5).

DP 62

This DP was collected north of Structure 62. This area met the wetland hydrology criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted gray dogwood (*Cornus racemosa*, FAC, 50%), tall false rye grass (FACU, 20%), and rape (FACW, 10%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 59

This DP was collected in the central portion of the SITE. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 10%), apple mint (*Mentha X rotundifolia*, FAC, 10%), bristle grass (FACU, 30%), meadow garlic (*Allium canadense*, FACU, 30%), and Indian-hemp (FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 57

This DP was collected south of Structure 57. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Virginia wildrye (FACW, 50%) and rape (*Brassica napus*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 52

This DP was collected in the central portion of the SITE. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 20%), fix sedge (FACW, 40%), and tall false rye grass (FACU, 35%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



DP 48

This DP was collected north of Structure 48. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Canadian goldenrod (FACU, 40%), tall false rye grass (FACU, 30%), and Japanese bristle grass (FACU, 25%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 46

This DP was collected south of Structure 46. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 40%) and purple dead-nettle (UPL, 30%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 44

This DP was collected north of Structure 44. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black walnut (*Juglans nigra*, FACU, 10% tree layer, 30% shrub layer), multiflora rose (FACU, 25%), dewberry (*Rubus caesius*, FACU, 20%), smooth brome (FACU, 50%), poison hemlock (FACW, 20%), tiger lily (*Lilium lancifolium*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 42

This DP was collected south of Structure 42. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 50%) and white clover (*Trifolium repens*, FACU, 30%). Since the area consists of active pasture, no soil profile was obtained in this area. No indicators of wetland hydrology were observed.

DP 41

This DP was collected south of Structure 41. This area met the hydric soil profile but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of European buckthorn (*Rhamnus cathartica*, FAC, 30%), tree of heaven (*Ailanthus altissima*, FACU, 15%), tall false rye grass (FACU, 30%), and woodland strawberry (*Fragaria vesca*, UPL, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 40

This DP was collected south of Structure 40. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of European buckthorn (FAC, 40%) and tall false rye grass (FACU, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 39

This DP was collected north of Structure 39. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 80%). Since the area consists of a residential lawn, no soil profile was obtained in this area. No indicators of wetland hydrology were observed.



DP 36

This DP was collected north of Structure 36. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of orchard grass (*Dactylis glomerata*, FACU, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 34

This DP was collected north of Structure 34. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 50%) and common chickweed (FACU, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 32

This DP was collected south of Structure 32, north of the stormwater pond. This area met the hydric vegetation and soil criteria but did not meet the hydrology criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 100%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of hydrology observed included one secondary indicator, FAC-neutral test (D5).

DP 32A

This DP was collected south of Structure 32, north of the stormwater pond. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Johnson grass (*Sorghum halepense*, FACU, 60%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 31A

This DP was collected south of Structure 31 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 50%) and Kentucky blue grass (FAC, 45%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 26

This DP was collected north of Structure 26. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (UPL, 40%), Amur honeysuckle (UPL, 10%), common chickweed (FACU, 50%), and winter creeper (*Euonymus fortunei*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 23

This DP was collected south of Structure 23. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 40%), Kentucky blue grass (FAC, 30%), and white clover (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



DP 22A

This DP was collected south of Structure 22 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (UPL, 40%), broomsedge (*Andropogon virginicus*, FACU, 40%), and yellow bristle grass (FAC, 30%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 20

This DP was collected southeast of Structure 20. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 40%), common chickweed (FACU, 40%), and purple dead-nettle (UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 15

This DP was collected north of Structure 15. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Kentucky blue grass (FAC, 40%), poison hemlock (FACW, 20%), and purple coneflower (*Echinacea pallida*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 13

This DP was collected north of Structure 13. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Kentucky blue grass (FAC, 60%), groundivy (*Glechoma hederacea*, FACU, 20%), and white clover (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 11

This DP was collected south of Structure 11. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of orchard grass (FACU, 75%) and tall false rye grass (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 8A

This DP was collected north of Structure 8 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of sassafras (*Sassafras albidum*, FACU, 75%), orchard grass (FACU, 50%), white avens (*Geum canadense*, FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 7

This DP was collected north of Structure 7. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black raspberry (UPL, 10%), orchard grass, (FACU, 35%), wand panic grass (*Panicum virgatum*, FAC, 30%), Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



DP 5A

This DP was collected south of Structure 5, in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 60%) and common chickweed (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 3A

This DP was collected south of Structure 3, in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 100%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 1A

This DP was collected north of Structure 1. This area met no wetland criteria.. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black walnut (FACU, 20% tree layer, 20% shrub layer), black locust (*Robinia pseudoacacia*, FACU, 10% tree layer, 30% shrub layer), and poison hemlock (FACW, 70%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 1

This DP was collected north of Structure 1, near West Lancaster Station. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black locust (FACU, 20%), poison hemlock (FACW, 20%), reed canary grass (FACW, 20%), Kentucky blue grass (FAC, 20%), and Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. Evidence of hydrology observed included one secondary indicator, FAC-neutral test (D5).

4.5 DRAINAGE FEATURES, STREAMS, AND OTHER POTENTIAL “WATERS OF THE U.S.”

Seventeen streams and two open water bodies were identified during this investigation using the methods described in Chapter 2. Information that V3 collected at each feature on March 27 and 28, 2024 is described in the following section. An overall SITE delineation map is included as **Figure 4**.

Table 4-7: Delineated Streams Identified within the Survey Area

Feature	Location		Stream Type	Delineated Length (LF)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility
	Latitude	Longitude					Method	Score	Category / Rating / OAC Designation	
ST-31PER	39.884393	-82.570045	Perennial	200	15	6	HHEI	46	Class II	Eligible
ST-25-PER	39.871932	-82.576556	Perennial	115	15	4.5	QHEI	40	Poor	Eligible
ST-15-PER	39.854039	-82.583946	Perennial	140	25	8	QHEI	33	Poor	Eligible
Walnut Creek	39.830733	-82.592574	Perennial	130	70	8	QHEI	59	Fair	Eligible



ST-2-PER	39.828794	-82.593100	Perennial	75	15	1	HHEI	54	Class II	Eligible
ST-68-INT	39.821861	-82.597822	Intermittent	370	3	2	HHEI	52	Class II	Eligible
ST-63-EPH	39.814531	-82.605325	Ephemeral	150	2	1	HHEI	37	Class II	Eligible
ST-55-INT	39.800803	-82.617154	Intermittent	145	20	3	HHEI	65	Class II	Eligible
ST-53-INT	39.798781	-82.618683	Intermittent	170	15	3	HHEI	79	Class III	Eligible
ST-48-EPH	39.789227	-82.623228	Ephemeral	115	1	0.5	HHEI	37	Class II	Eligible
ST-44-INT	39.780704	-82.626219	Intermittent	80	15	4	HHEI	55	Class II	Eligible
ST-44-EPH	39.775429	-82.627703	Ephemeral	175	3	1	HHEI	27	Class I	Eligible
ST-42-INT	39.775106	-82.627853	Intermittent	240	12	4	HHEI	63	Class II	Eligible
Hocking River	39.729227	-82.633761	Perennial	330	60	40	QHEI	56.5	Fair	Eligible
ST-14-PER	39.725387	-82.631711	Perennial	70	30	8	QHEI	40.25	Poor	Eligible
ST-11-INT	39.719129	-82.638527	Intermittent	110	20	2.5	HHEI	26	Class I	Eligible
Hunters Run	39.702036	-82.638647	Perennial	200	60	11	QHEI	44	Poor	Eligible

4.5.1 *ST-31-PER – (200-linear feet, Perennial stream)*

ST-31-PER is located in northeast of Structure 31 and consisted of 200 linear feet of perennial stream within the SITE. The substrate of ST-31-PER consisted of silt and clay. ST-31-PER has an average width at the ordinary high water mark (OHWM) of 6 feet within the SITE. ST-31-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.2 *ST-25-PER – (75-linear feet, Perennial stream)*

ST-25-PER is located north of Structure 25 and consisted of 75 linear feet of perennial stream within the SITE. The substrate of ST-25-PER consisted of sand and silt. ST-25-PER has an average width at the OHWM of 4.5 feet within the SITE. ST-25-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.3 *ST-15-PER – (140-linear feet, Perennial stream)*

ST-15-PER is located north of Structure 15 and consisted of 140 linear feet of perennial stream within the SITE. The substrate of ST-15-PER consisted of silt, clay, and sand. ST-15-PER has an average width at the OHWM of 8 feet within the SITE. ST-15-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.4 *Walnut Creek – (130-linear feet, Perennial stream)*

Walnut Creek is located north of Structure 3 and consisted of 130 linear feet of perennial stream within the SITE. The substrate of Walnut Creek consisted of cobble and gravel. Walnut Creek has an average



width at the OHWM of 8 feet within the SITE. Walnut Creek appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.5 *ST-2-PER – (75-linear feet, Perennial stream)*

ST-2-PER is located north of Structure 2 and consisted of 75 linear feet of perennial stream within the SITE. The substrate of ST-2-PER consisted of silt. ST-2-PER has an average width at the OHWM of 1 foot within the SITE. ST-2-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.6 *ST-68-INT – (370-linear feet, Intermittent stream)*

ST-68-INT is located northeast of Structure 68 and consisted of 370 linear feet of intermittent stream within the SITE. The substrate of ST-68-INT consisted of silt and clay. ST-68-INT has an average width at the OHWM of 2 feet within the SITE. ST-68-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.7 *ST-63-EPH– (150-linear feet, Ephemeral stream)*

ST-63-EPH is located northeast of Structure 63 and consisted of 150 linear feet of ephemeral stream within the SITE. ST-63-EPH emerges from a tile drain, flows southeastward and discharges into a second tile drain. The substrate of ST-63-EPH consisted of silt. ST-63-EPH has an average width at the OHWM of 1 foot within the SITE. ST-63-EPH did not appear to be a relatively permanent water and will likely not qualify as federally jurisdictional “Waters of the U.S.”

4.5.8 *ST-55-INT – (145-linear feet, Intermittent stream)*

ST-55-INT is located southwest of Structure 55 and consisted of 145 linear feet of ST-55-INT stream within the SITE. The substrate of ST-55-INT consisted of sand and clay. ST-55-INT has an average width at the OHWM of 3 feet within the SITE. ST-55-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.9 *ST-53-INT – (170-linear feet, Intermittent stream)*

ST-53-INT is located east of Structure 53 and consisted of 170 linear feet of intermittent stream within the SITE. The substrate of ST-53-INT consisted of cobble, gravel, and sand. ST-53-INT has an average width at the OHWM of 3 feet within the SITE. ST-53-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.10 *ST-48-EPH – (115-linear feet, Ephemeral stream)*

ST-48-EPH is located south of Structure 49 and consisted of 115 linear feet of ephemeral stream within the SITE. The substrate of ST-48-EPH consisted of clay and silt. ST-48-EPH has an average width at the OHWM of 5 feet within the SITE. ST-48-EPH did not appear to be a relatively permanent water and will likely not qualify as federally jurisdictional “Waters of the U.S.”

4.5.11 *ST-44-INT – (80-linear feet, Intermittent stream)*

ST-44-INT is located northwest of Structure 44 and consisted of 80 linear feet of intermittent stream within the SITE. The substrate of ST-44-INT consisted of cobble and gravel. ST-44-INT has an average width at the OHWM of 4 feet within the SITE. ST-44-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.12 *ST-44-EPH – (175-linear feet, Ephemeral stream)*

ST-44-EPH is located southwest of Structure 42 and consisted of 175 linear feet of ephemeral stream within the SITE. The substrate of ST-44-EPH consisted of silt. ST-44-EPH has an average width at the



OHW of 1 foot within the SITE. ST-44-EPH appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.13 ST-42-INT – (240-linear feet, Intermittent stream)

ST-42-INT is located southwest of Structure 42 and consisted of 240 linear feet of intermittent stream within the SITE. The substrate of ST-44-EPH consisted of gravel, sand, and silt. ST-44-EPH has an average width at the OHWM of 4 feet within the SITE. ST-44-EPH appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.14 Hocking River – (330-linear feet, Perennial stream)

Hocking River is located southeast of Structure 19 and consisted of 300 linear feet of Hocking River stream within the SITE. The substrate of Hocking River consisted of cobble, sand, and silt. Hocking River has an average width at the OHWM of 40 feet within the SITE. Hocking River appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.” Additionally, Hocking River is designated by the U.S. Army Corps of Engineers (USACE) as a Section 10 Navigable Waterway 79 miles upstream of the confluence of the Ohio River.

4.5.15 ST-14-PER – (70-linear feet, Perennial stream)

ST-14-PER is located north of Structure 15 and consisted of 70 linear feet of perennial stream within the SITE. The substrate of ST-14-PER consisted of cobble, gravel, and sand. ST-14-PER has an average width at the OHWM of 8 feet within the SITE. ST-14-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.16 ST-11-INT – (110-linear feet, Intermittent stream)

ST-11-INT is located northeast of Structure 11 and consisted of 110 linear feet of intermittent stream within the SITE. The substrate of ST-11-INT consisted of clay and silt. ST-11-INT has an average width at the OHWM of 25 feet within the SITE. ST-11-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.17 Hunters Run – (200-linear feet, Perennial stream)

Hunters Run is located north of Structure 1 and West Lancaster Station. It consisted of 300 linear feet of perennial stream within the SITE. The substrate of Hunters Run consisted of cobble, gravel, and sand. Hunters Run has an average width at the OHWM of 11 feet within the SITE. Hunters Run appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

4.5.18 OW-32-POND – (±0.50-acre, Pond)

OW-32-POND is located south of Structure 32 of the SITE. OW-32-POND appears to be a manmade feature.

4.5.19 OW-22-POND – (±0.56-acre, Pond)

OW-22-POND is located north of Structure 22 of the SITE. OW-22-POND appears to be a manmade feature.



CHAPTER 5 CONCLUSIONS

On March 27 and 28, 2024, V3 performed a wetland delineation of the SITE beginning at West Millersport Station, southwest of OH-204 and OH-37, Millersport, OH, and extends approximately 4.6 mile southwest to South Baltimore Station and continues approximately 9.8 miles southwest to West Lancaster Station, northeast of US Highway 22 and OH-57 in Fairfield County, Ohio.

Table 5-1: Aquatic Features Identified On-SITE

Feature	Feature Type	Size On-SITE	Delineation Figure Sheet
WL-12-PEM	Emergent Wetland	0.06 ac	10
WL-10-PEM	Emergent Wetland	0.17 ac	11
WL-5-PEM	Emergent Wetland	0.11 ac	13
WL-68-PEM	Emergent Wetland	0.10 ac	15
WL-60-PEM	Emergent Wetland	1.91 ac	18
WL-50-PEM	Emergent Wetland	0.03 ac	22
WL-41-PEM	Emergent Wetland	0.40 ac	26
ST-31-PER	Perennial stream	200 lf	2
ST-25-PER	Perennial stream	115 lf	4
ST-15-PER	Perennial stream	140 lf	8
Walnut Creek	Perennial stream	130 lf	13
ST-2-PER	Perennial stream	75 lf	14
ST-68-INT	Intermittent stream	370 lf	15
ST-63-EPH	Ephemeral stream	150 lf	17
ST-55-INT	Intermittent stream	145 lf	20
ST-53-INT	Intermittent stream	170 lf	20
ST-48-EPH	Ephemeral stream	115 lf	22
ST-44-INT	Intermittent stream	80 lf	24
ST-44-EPH	Ephemeral stream	175 lf	25
ST-42-INT	Intermittent stream	240 lf	25 & 26
Hocking River	Perennial stream	330 lf	36
ST-14-PER	Perennial stream	70 lf	37
ST-11-INT	Intermittent stream	110 lf	38
Hunters Run	Perennial stream	200 lf	42
OW-32-POND	Pond	0.50 ac	30
OW-22-POND	Pond	0.56 ac	34

- Seventeen streams were identified on-SITE. All streams, except ST-63-EPH and ST-48-EPH, appear to be relatively permanent waters that will likely qualify as federally jurisdictional “Waters of the U.S.”.
- Eight wetlands were identified on-SITE. Wetlands WL-68-PEM, WL-41-PEM and WL-18-PEM appear to have a connection to relatively permanent waters, therefore, will likely qualify as a “Waters of the U.S.”. All the other wetlands did not appear to have direct connection to relatively permanent waters and are likely to be considered isolated.

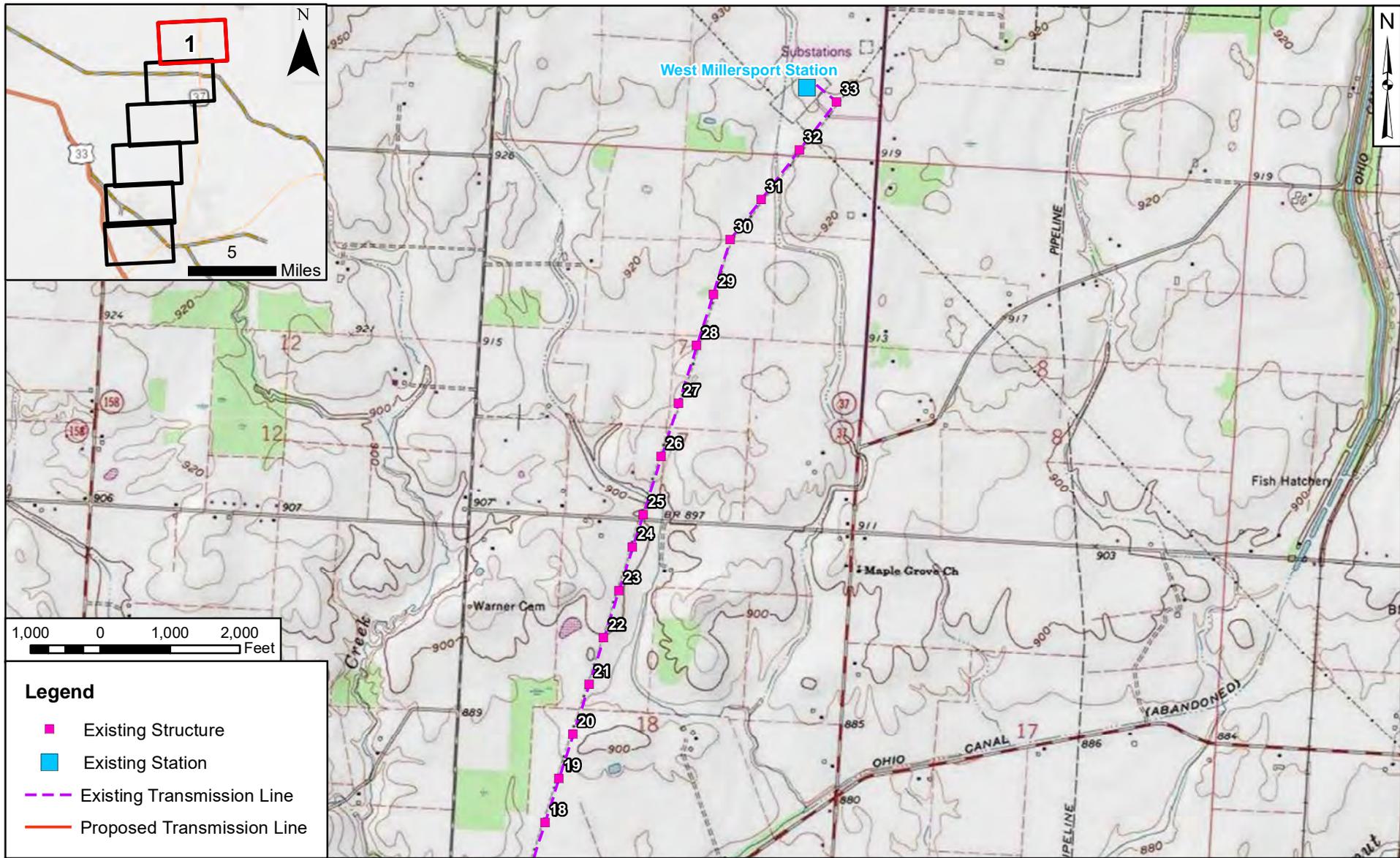


- Two stormwater ponds were identified on-SITE. One stormwater pond was identified within an inaccessible residential area. The ponds appear to be isolated man-made features.
- An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat, northern long-eared bat, the proposed endangered tricolored bat, the federally threatened eastern massasauga, and round hickorynut, the proposed endangered salamander Mussel and the candidate for listing monarch butterfly. The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 1 October to 31 March. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.
- Correspondence with the ODNR indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranthus fasciolaris*), a Great blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Potentially suitable habitat for the kidneyshell was observed within the SITE. The documented plant communities are anticipated to occur within forested areas adjacent to the SITE. Additionally, the ODNR Division of Fish and Wildlife stated that the SITE is within the range of seven ETR species. The ODNR stated that the project is not likely to impact these species if habitat is not impacted and gave recommendations to avoid and minimize impacts to these species and their habitats.



Figures





Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line

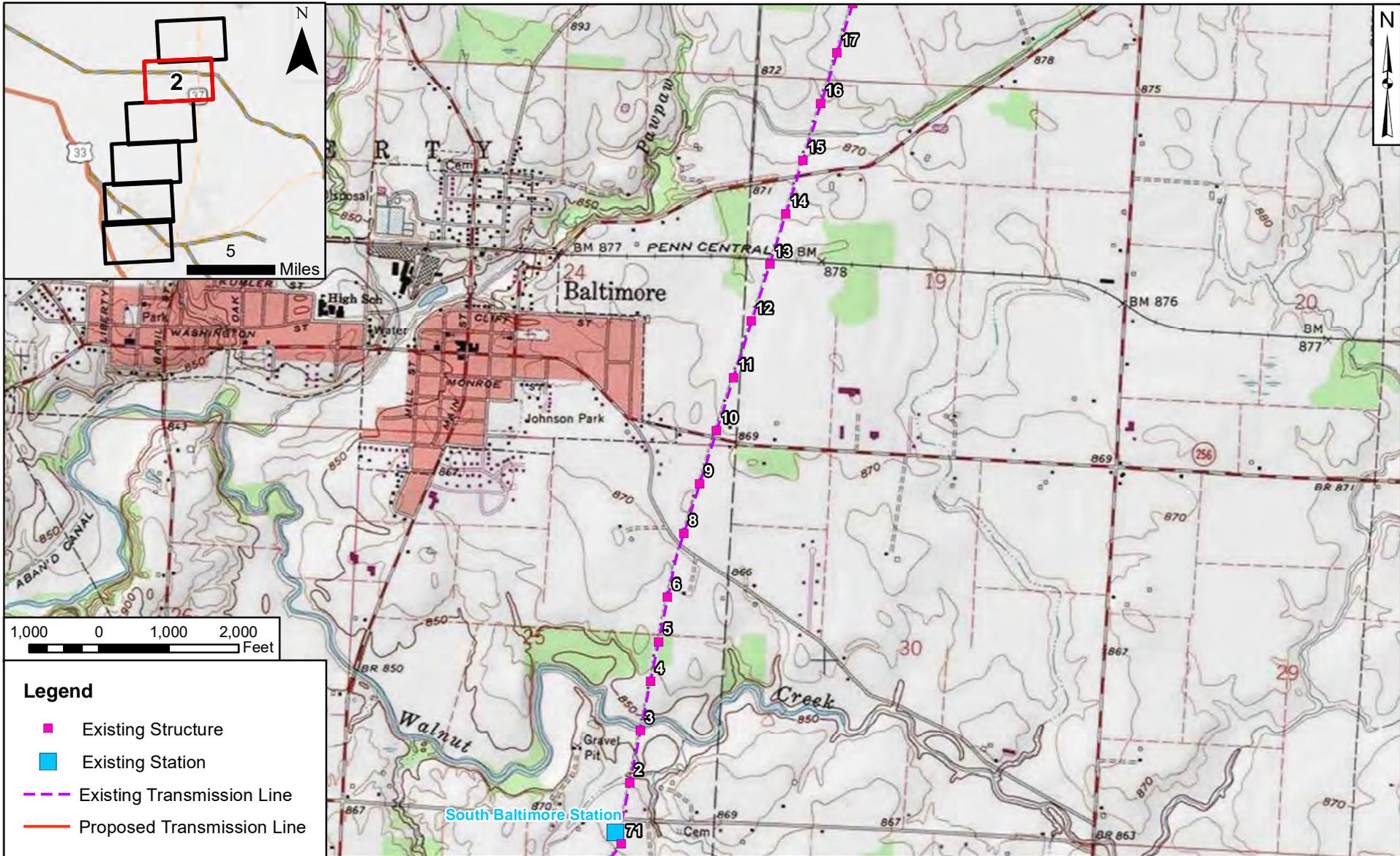
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FIGURE:	1 Page 1 of 6	



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line

Legend

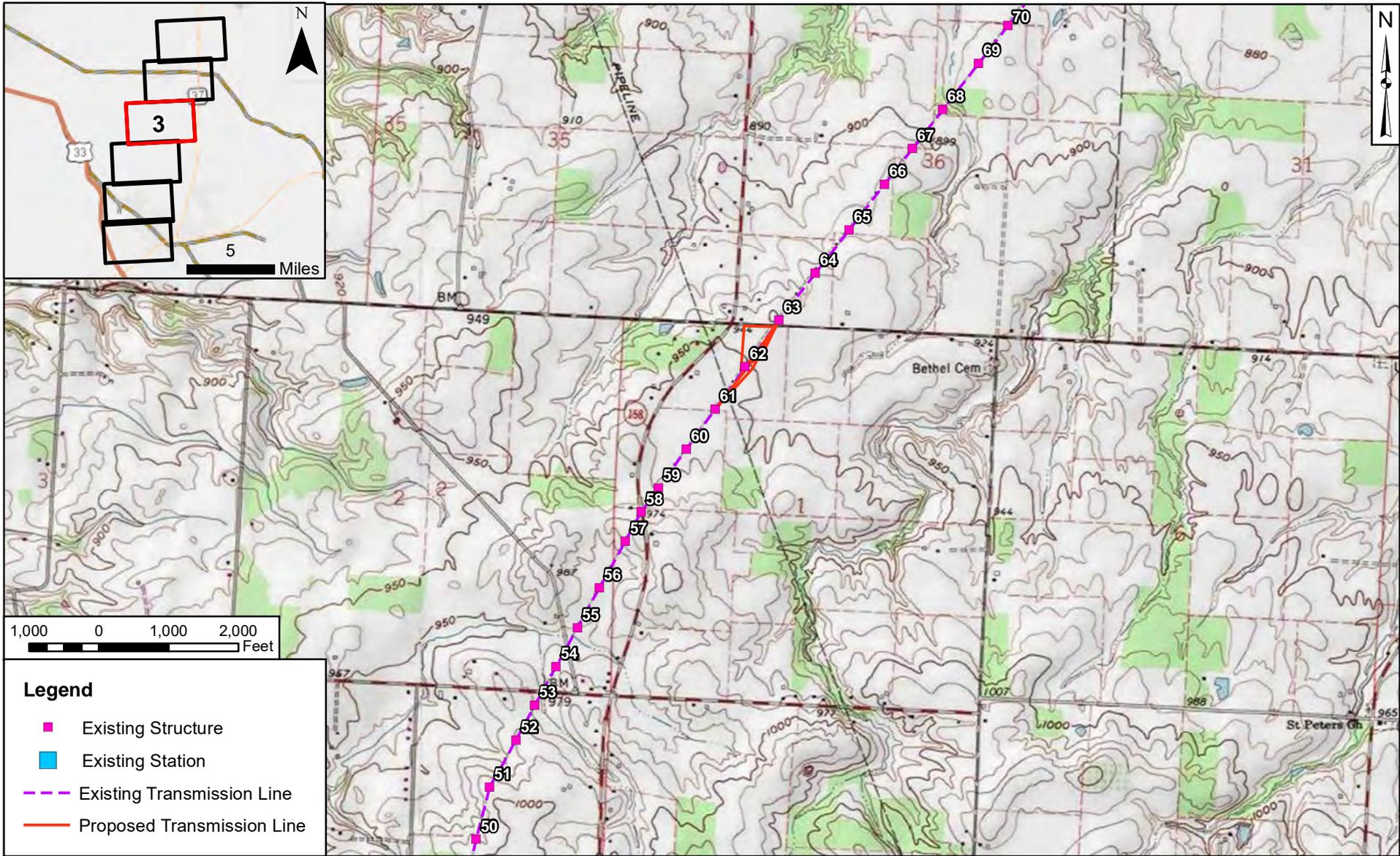
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FIGURE:	1 Page 2 of 6	



Legend

- Existing Structure
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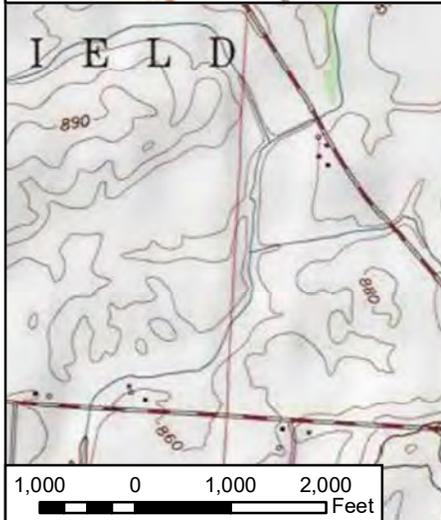
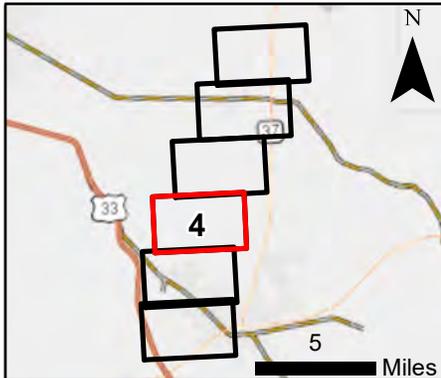
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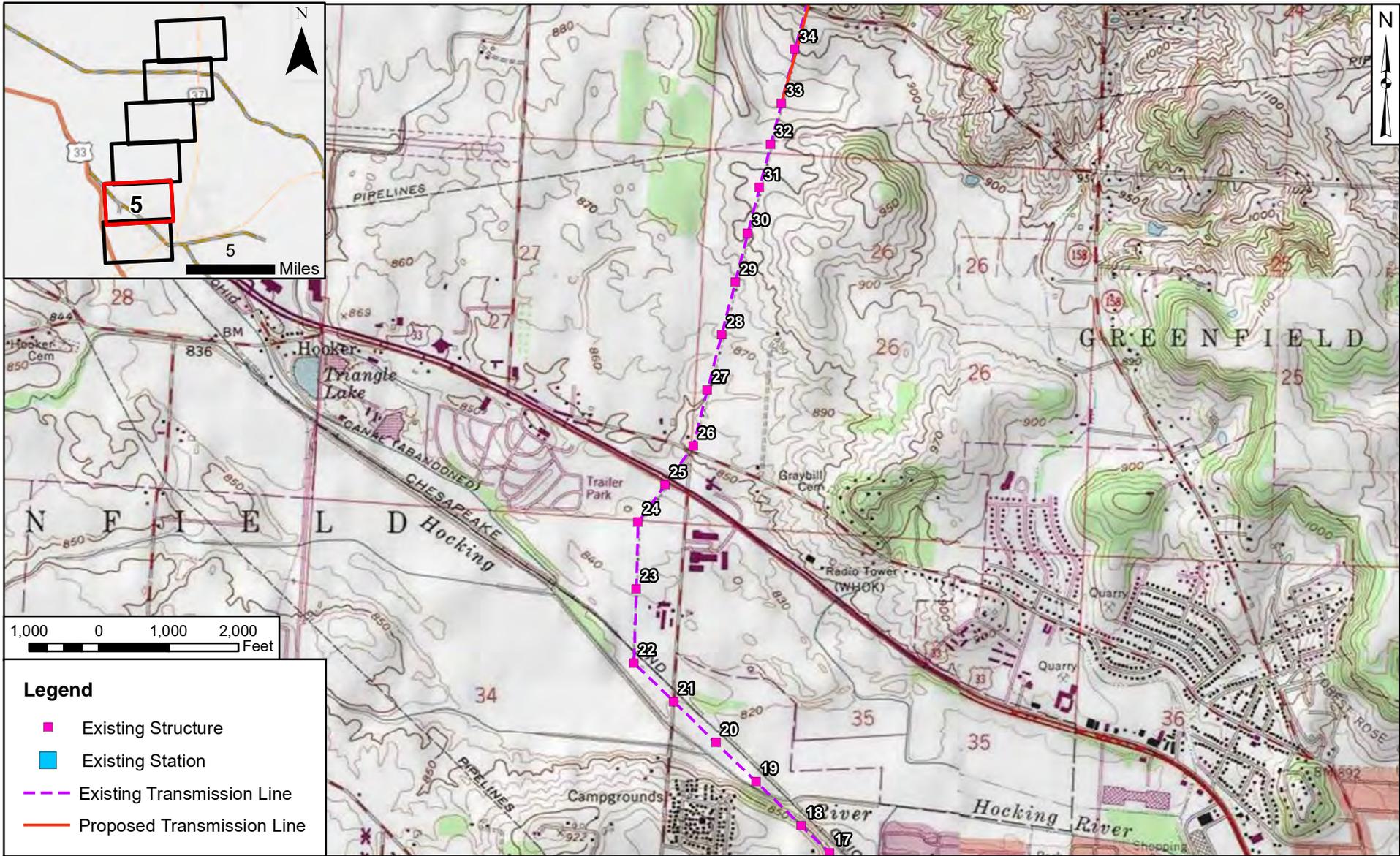


Legend	
■	Existing Structure
■	Existing Station
---	Existing Transmission Line
---	Proposed Transmission Line

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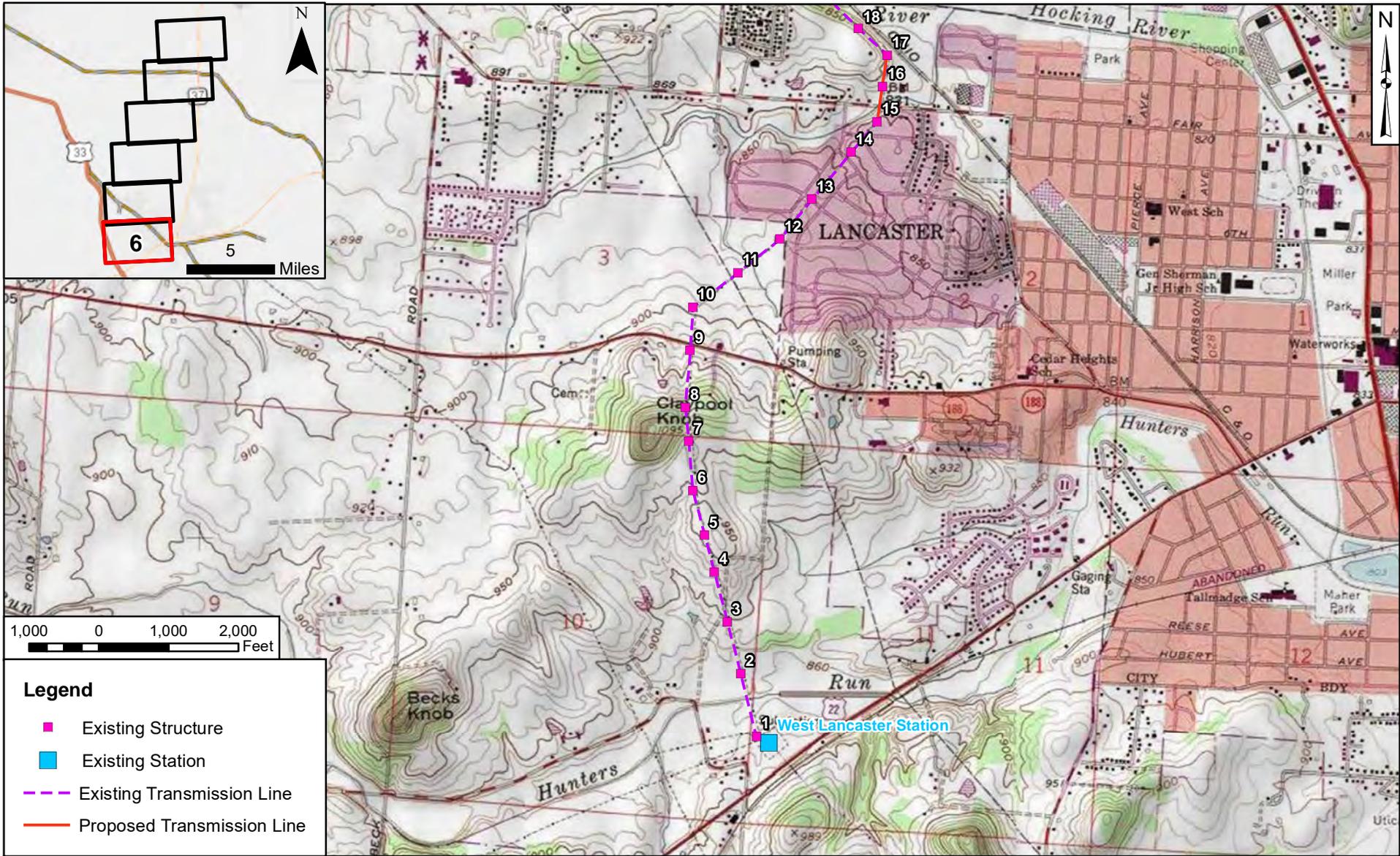


Legend

- Existing Structure
- Existing Station
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- Proposed Transmission Line

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FIGURE:	1	Page 5 of 6



Legend

- Existing Structure
- Existing Station
- - - Existing Transmission Line
- Proposed Transmission Line

Legend

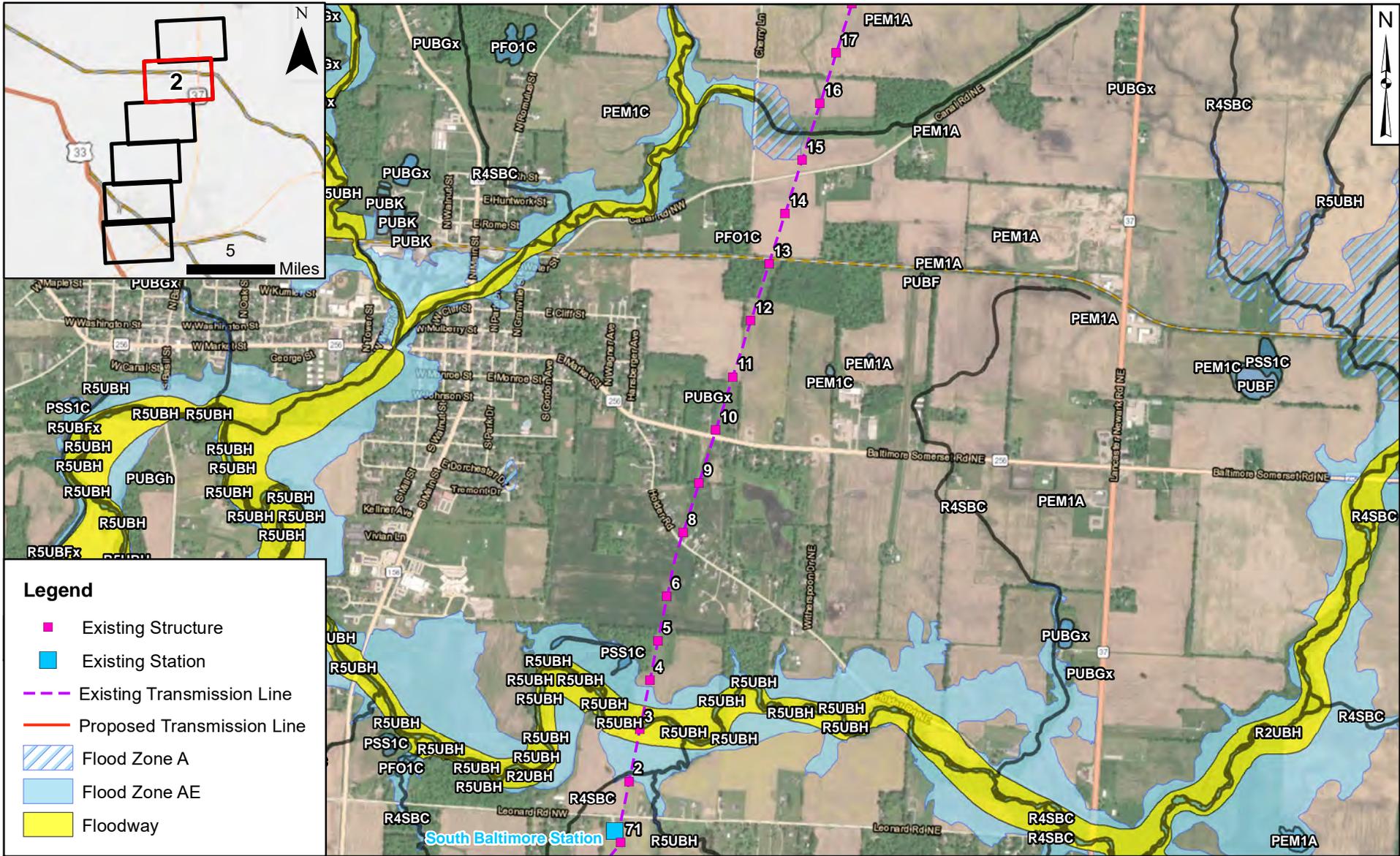
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FIGURE:	1	Page 6 of 6



Legend

- Existing Structure
- Existing Station
- - - Existing Transmission Line
- Proposed Transmission Line
- ▨ Flood Zone A
- Flood Zone AE
- Floodway



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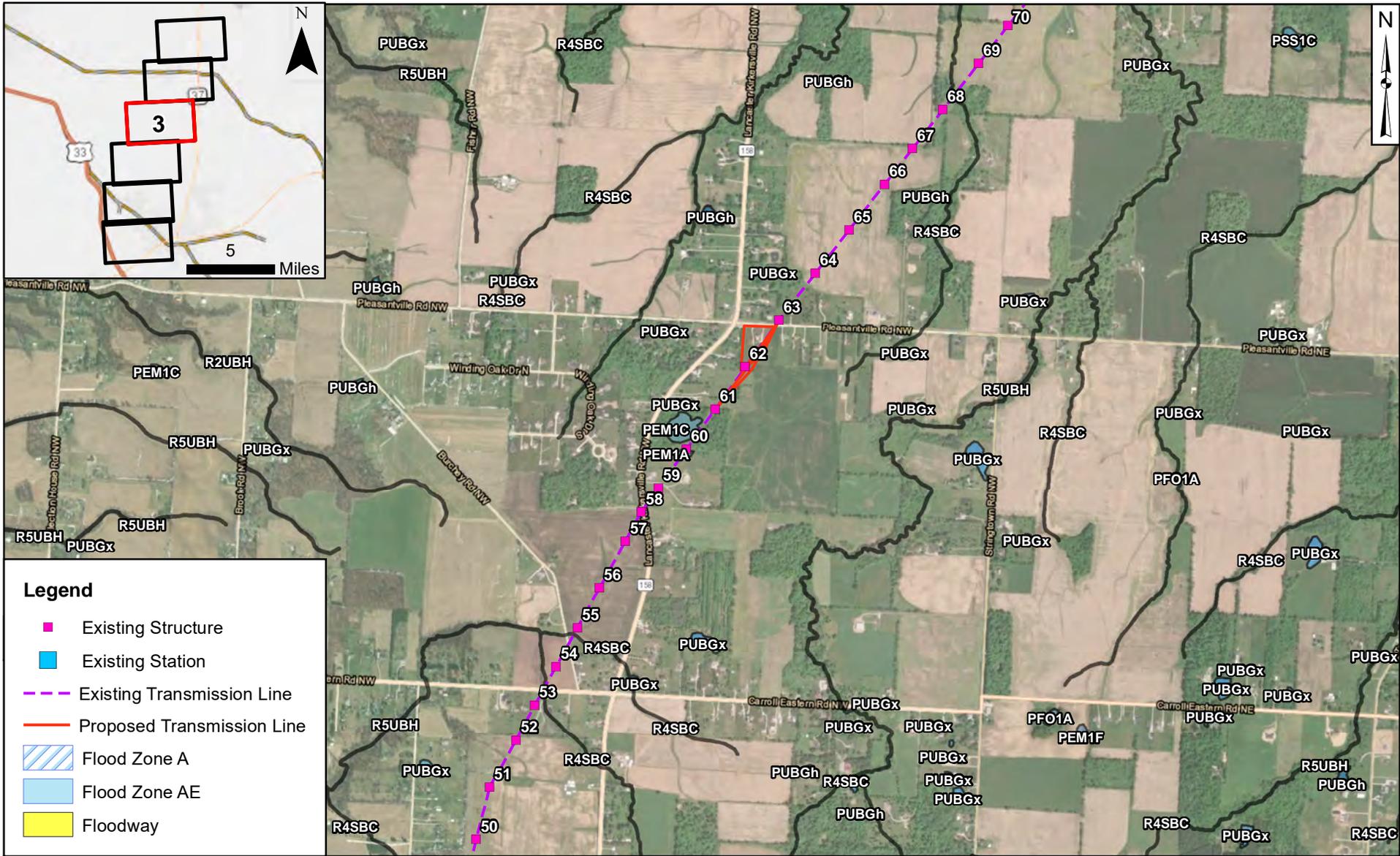
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TITLE: **NATIONAL WETLAND INVENTORY (NWI) & FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP**

SITE: West Lancaster – South Baltimore – West Millersport
 138kV Rebuild
 Fairfield County, Ohio

FIGURE: 2
 Page 2 of 6



Legend

- Existing Structure
- Existing Station
- - - Existing Transmission Line
- Proposed Transmission Line
- ▨ Flood Zone A
- Flood Zone AE
- Floodway



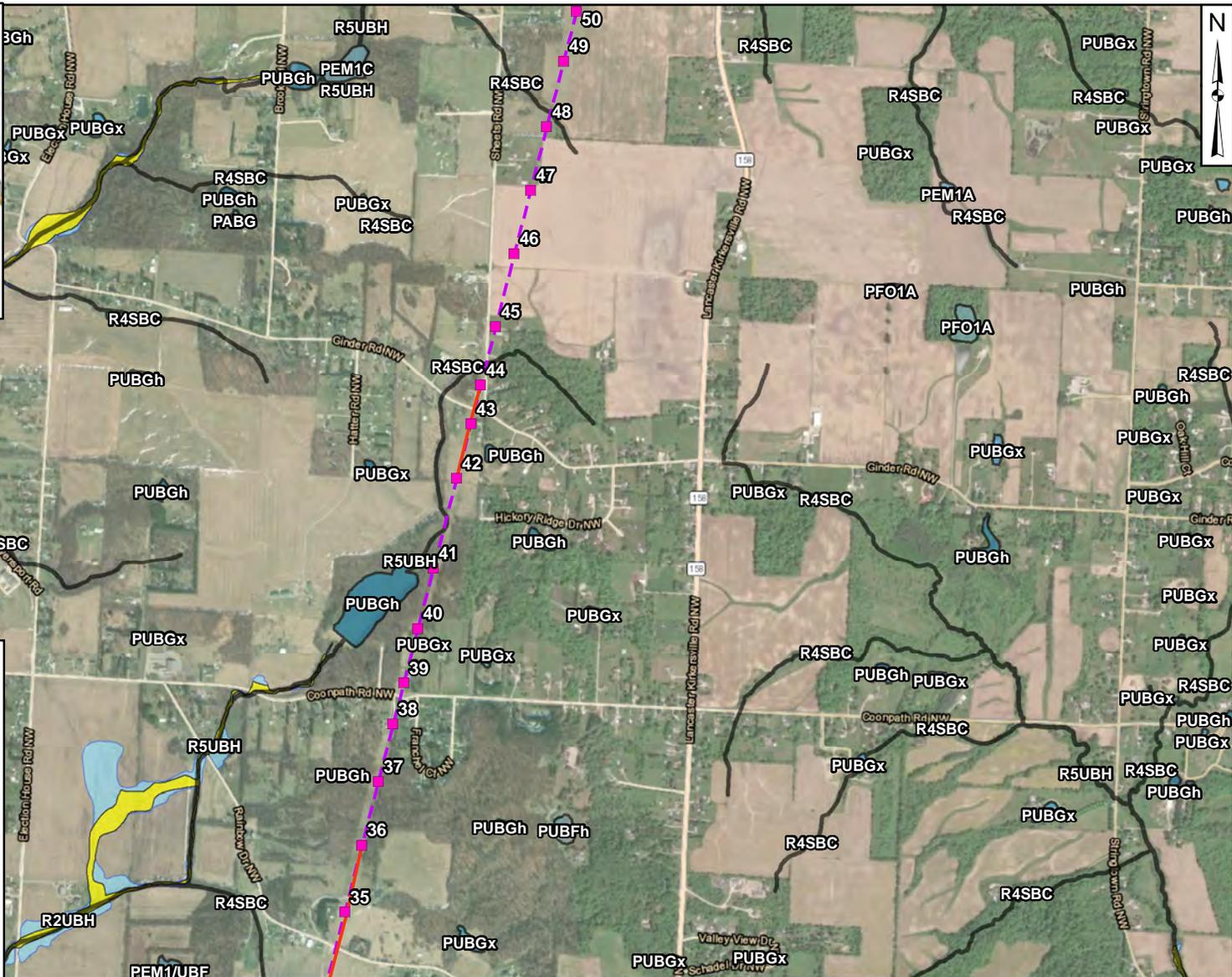
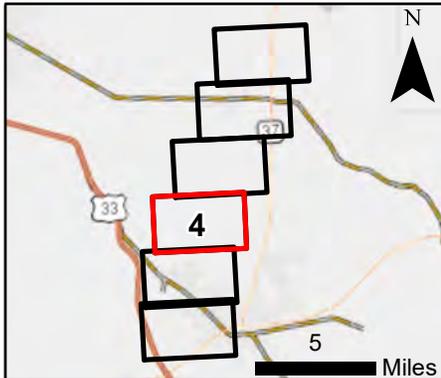
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BASE LAYER:	Aerial Imagery (2023)

TITLE: NATIONAL WETLAND INVENTORY (NWI) & FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP	
SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	FIGURE: 2 Page 3 of 6



Legend

- Existing Structure
- Existing Station
- - - Existing Transmission Line
- - - Proposed Transmission Line
- ▨ Flood Zone A
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- Floodway



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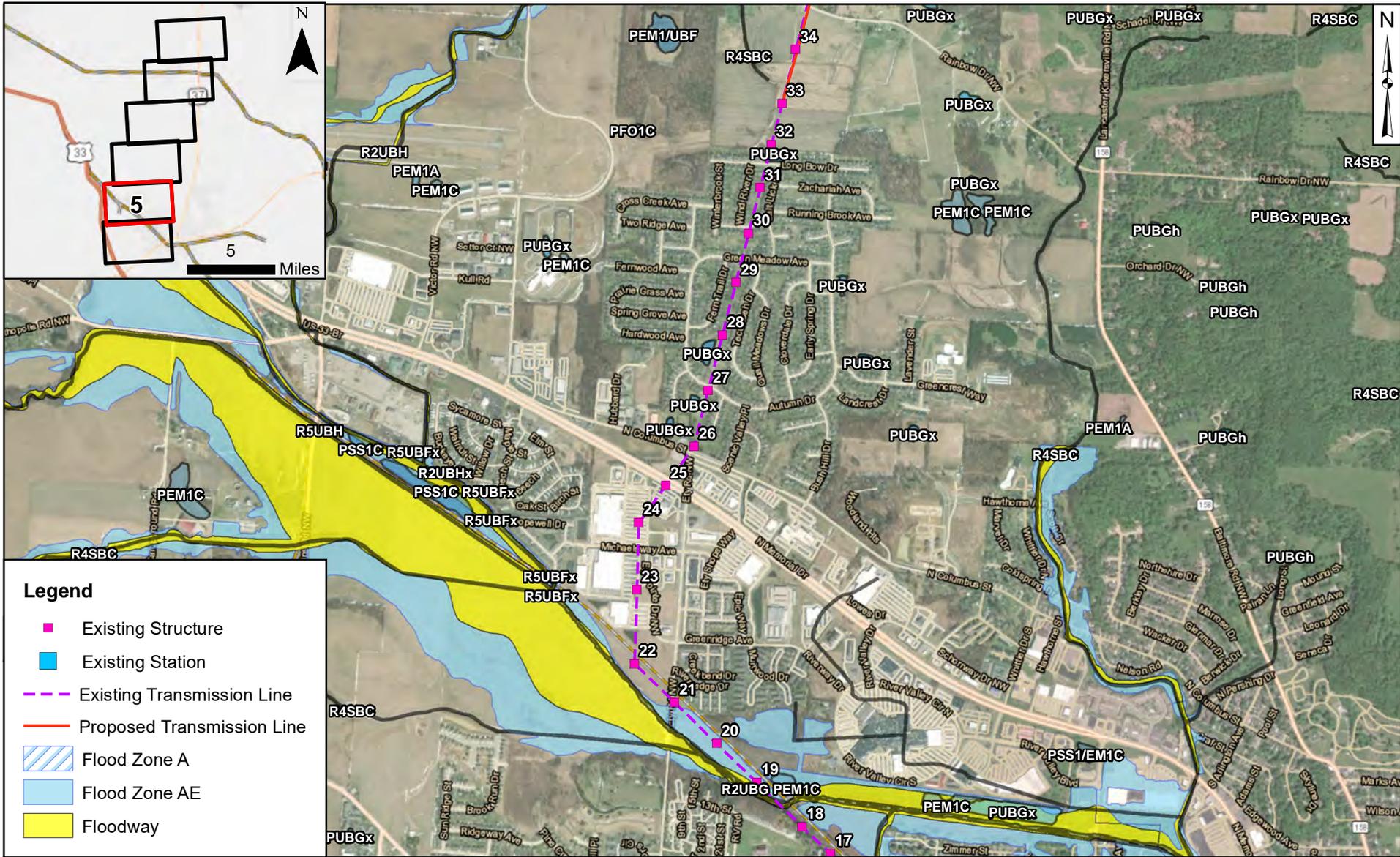
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TITLE: **NATIONAL WETLAND INVENTORY (NWI) & FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP**

SITE: West Lancaster – South Baltimore – West Millersport
138kV Rebuild
Fairfield County, Ohio

FIGURE: 2
Page 4 of 6



Legend

- Existing Structure
- Existing Station
- - - Existing Transmission Line
- Proposed Transmission Line
- Flood Zone A
- Flood Zone AE
- Floodway



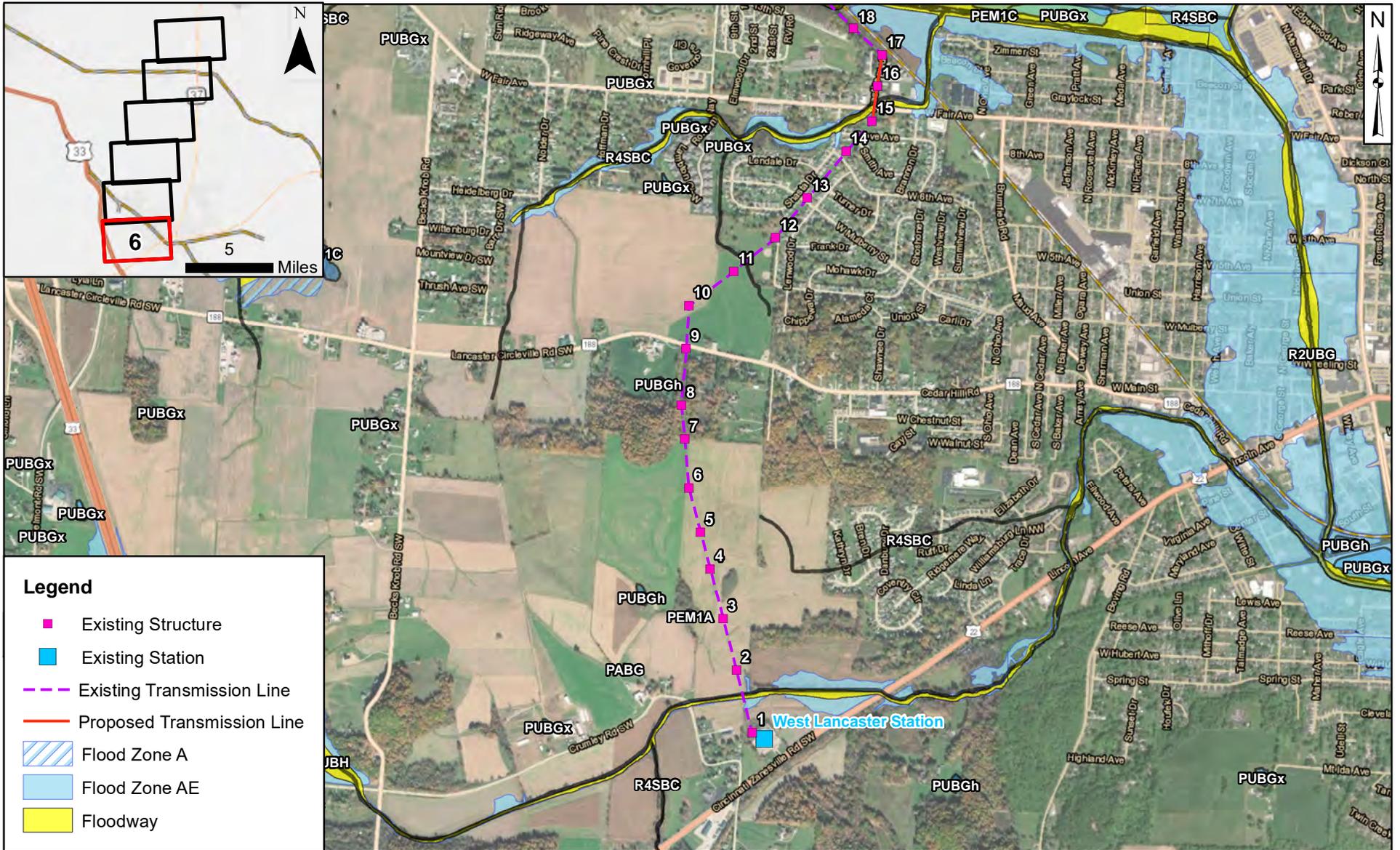
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PROJECT NO.:	210180.182
CREATED BY:	ODS
DATE:	03/18/2024
SCALE:	See Scale Bar

CLIENT:	American Electric Power 8600 Smiths Mill Road New Albany, Ohio 43054
BASE LAYER:	Aerial Imagery (2023)

TITLE:	NATIONAL WETLAND INVENTORY (NWI) & FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP	
SITE:	West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
FIGURE:	2	Page 5 of 6



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Flood Zone A
- Flood Zone AE
- Floodway

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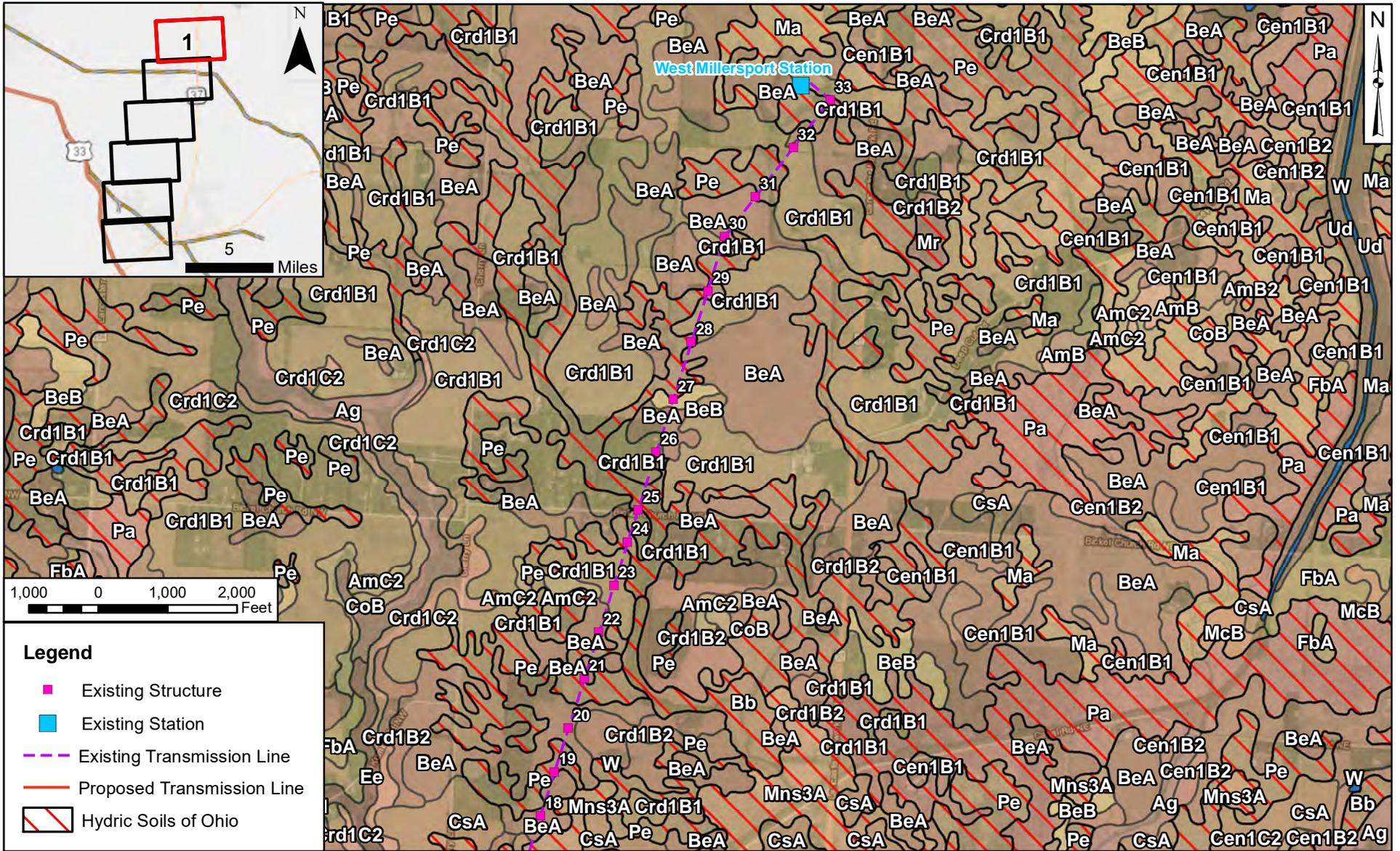
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CREATED BY:	ODS	BASE LAYER:	Aerial Imagery (2023)
DATE:	03/18/2024	SCALE:	See Scale Bar

TITLE: NATIONAL WETLAND INVENTORY (NWI) & FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP

SITE: West Lancaster – South Baltimore – West Millersport
138kV Rebuild
Fairfield County, Ohio

FIGURE: 2
Page 6 of 6



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Hydric Soils of Ohio

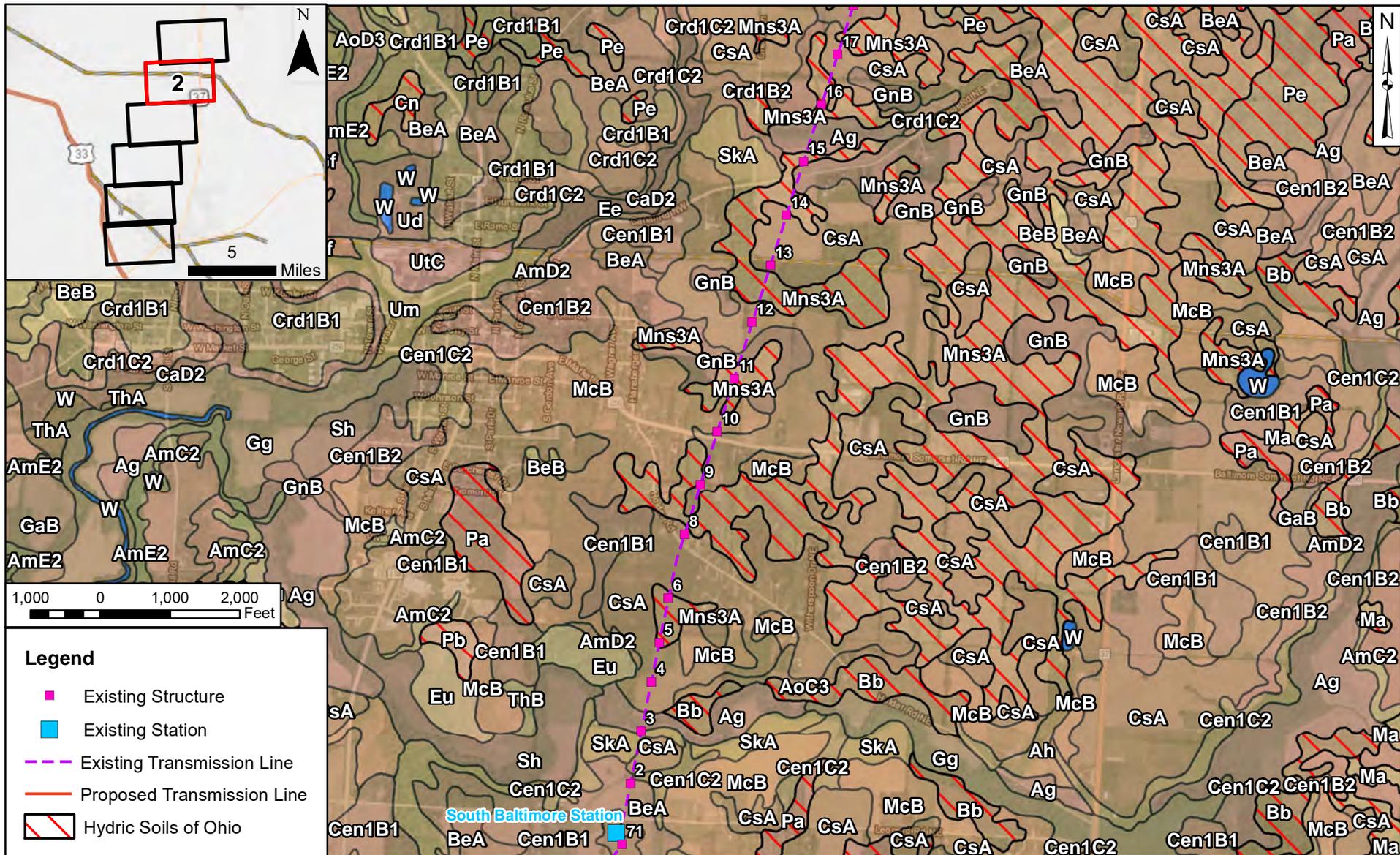
Legend

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PROJECT NO.:	210180.182	CLIENT:	American Electric Power 8600 Smiths Mill Road New Albany, Ohio 43054
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DATE:	03/18/2024	SCALE:	See Scale Bar

SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP		FIGURE:	3
West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio		Page 1 of 6	



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Hydric Soils of Ohio

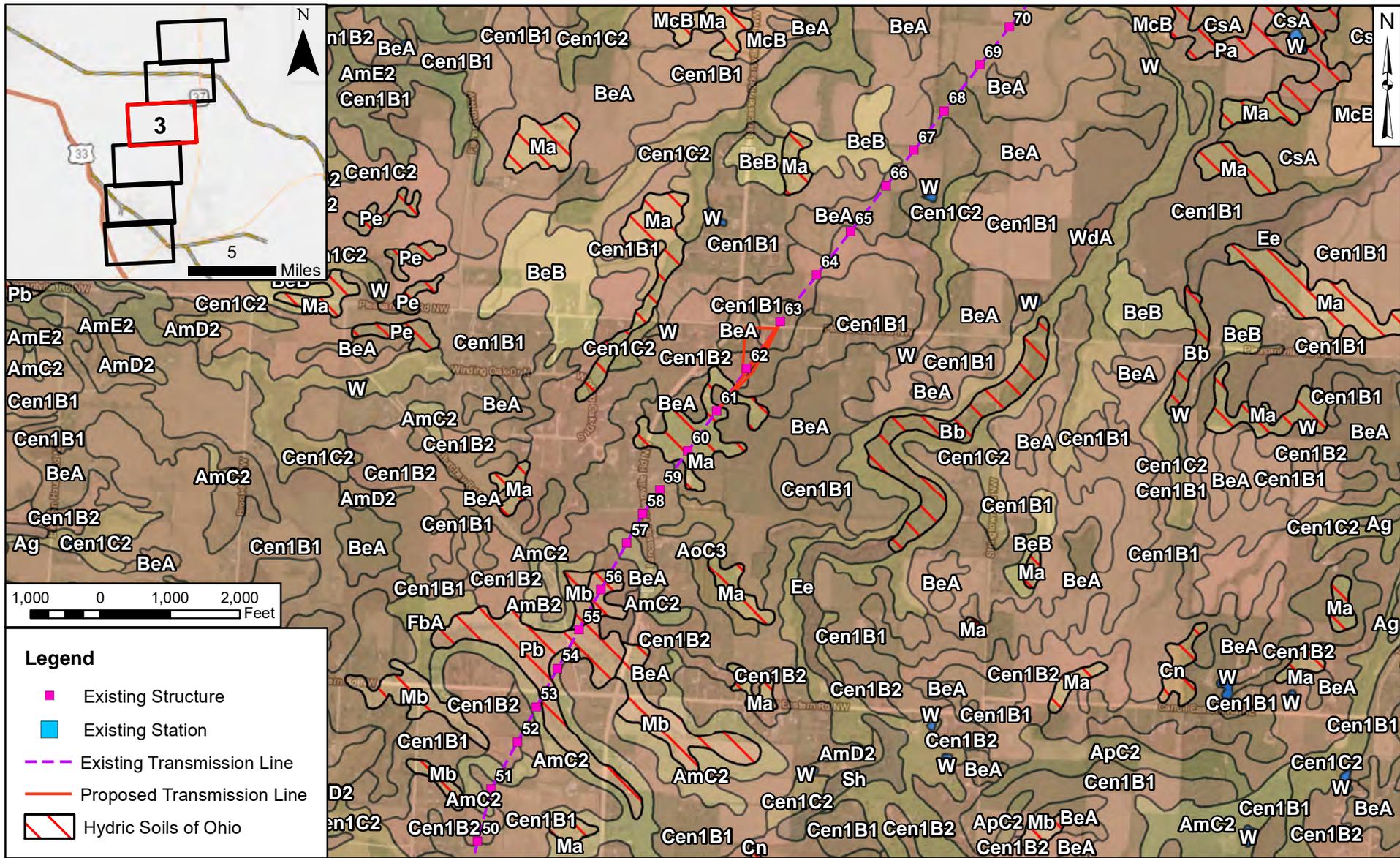


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PROJECT NO.:	210180.182	CLIENT:	American Electric Power 8600 Smiths Mill Road New Albany, Ohio 43054
CREATED BY:	ODS	BASE LAYER:	Aerial Imagery (2023)
DATE:	03/18/2024	SCALE:	See Scale Bar

SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP	
SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	FIGURE: 3 Page 2 of 6



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Hydric Soils of Ohio

PROJECT NO.: 210180.182
CLIENT: American Electric Power
 8600 Smiths Mill Road
 New Albany, Ohio 43054

CREATED BY: ODS
DATE: 03/18/2024
BASE LAYER: Aerial Imagery (2023)

SCALE: See Scale Bar

FIGURE: 3
 Page 3 of 6

PROJECT NO.: 210180.182
CLIENT: American Electric Power
 8600 Smiths Mill Road
 New Albany, Ohio 43054

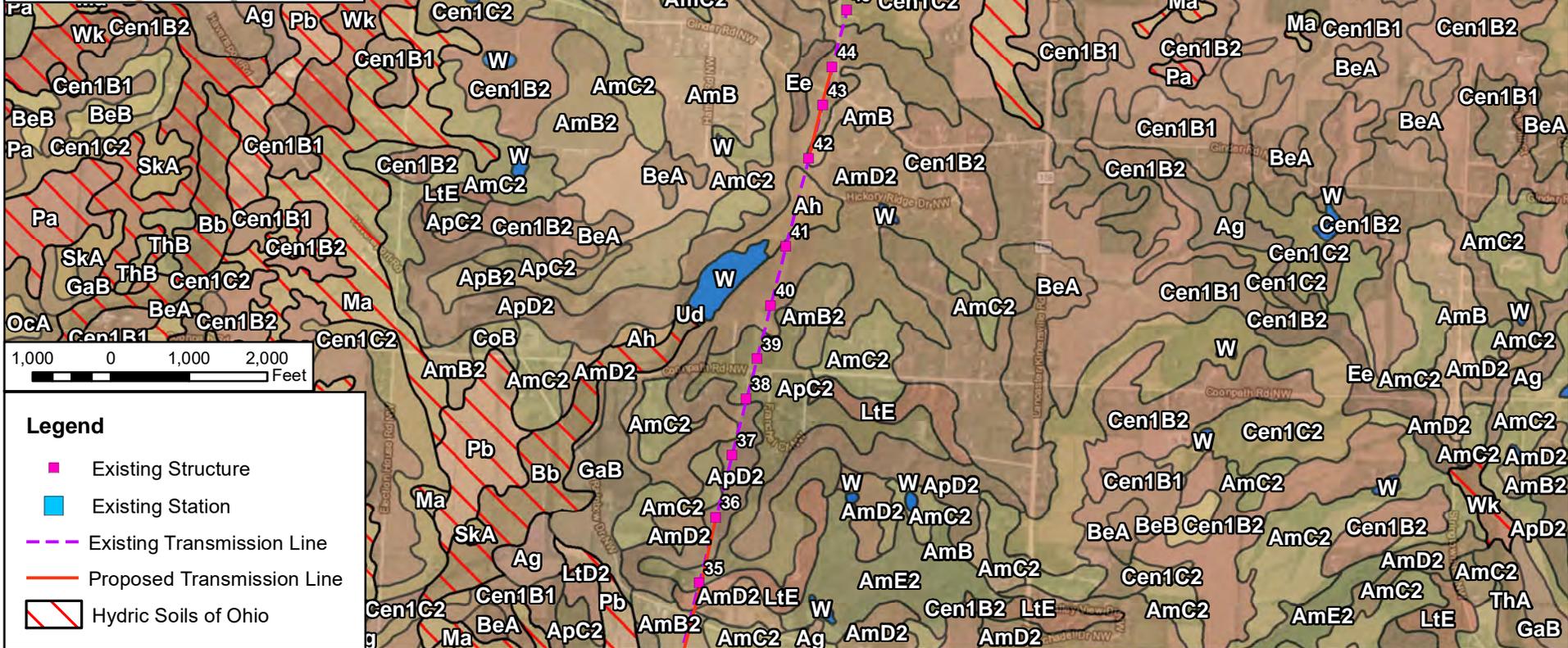
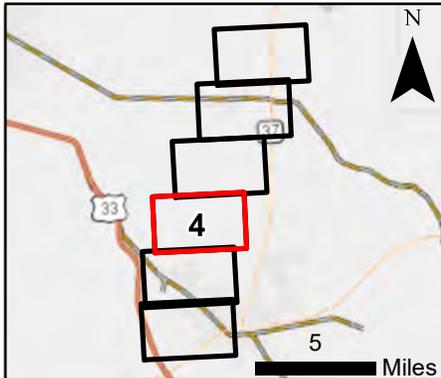
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BASE LAYER: Aerial Imagery (2023)

SCALE: See Scale Bar

TITLE: SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP

SITE: West Lancaster – South Baltimore – West Millersport
 138kV Rebuild
 Fairfield County, Ohio

FIGURE: 3
 Page 3 of 6

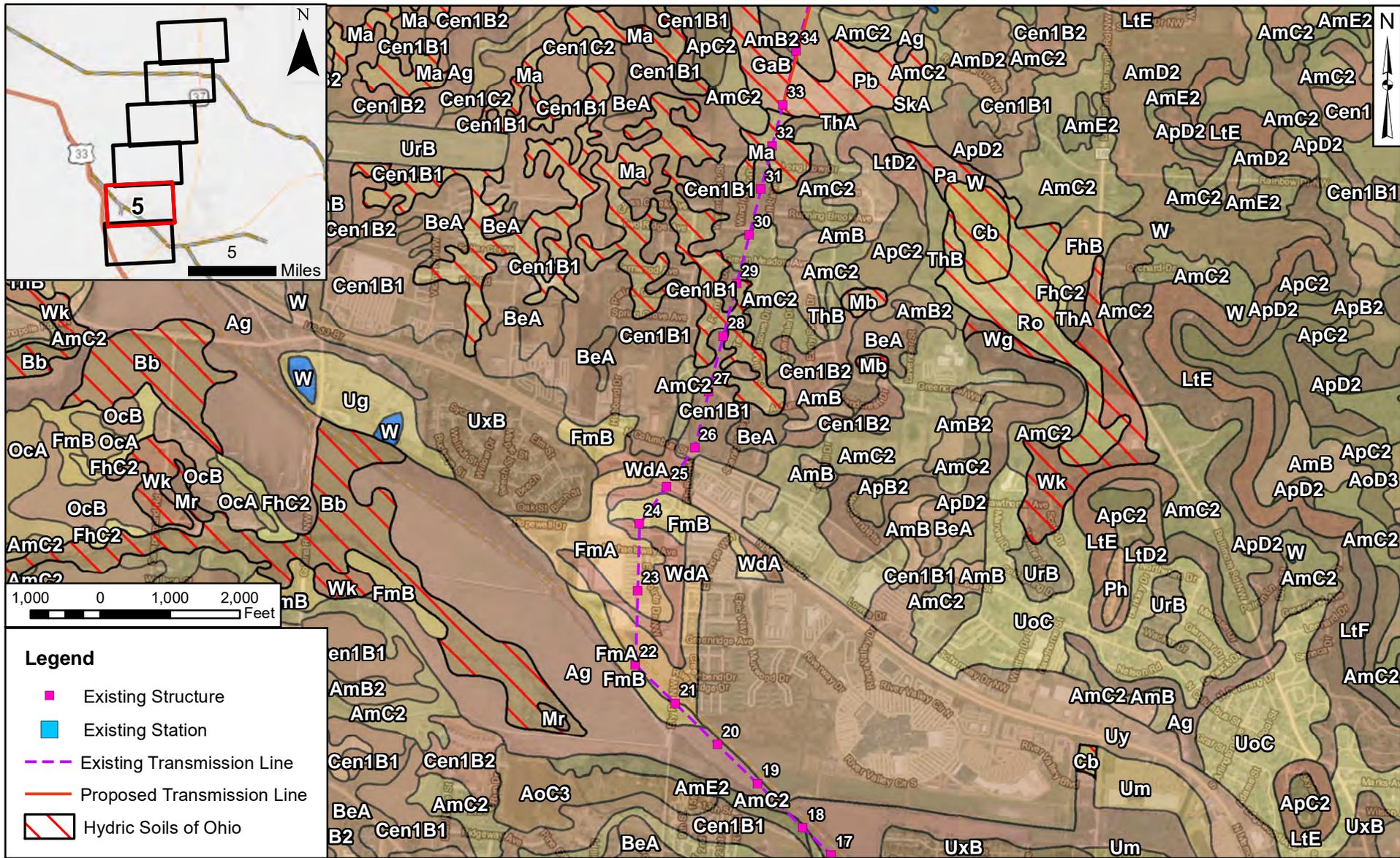


Legend	
	Existing Structure
	Existing Station
	Existing Transmission Line
	Proposed Transmission Line
	Hydric Soils of Ohio

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DATE:	03/18/2024	SCALE:	See Scale Bar

SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP	
TITLE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
FIGURE:	3
Page 4 of 6	



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- / Hydric Soils of Ohio

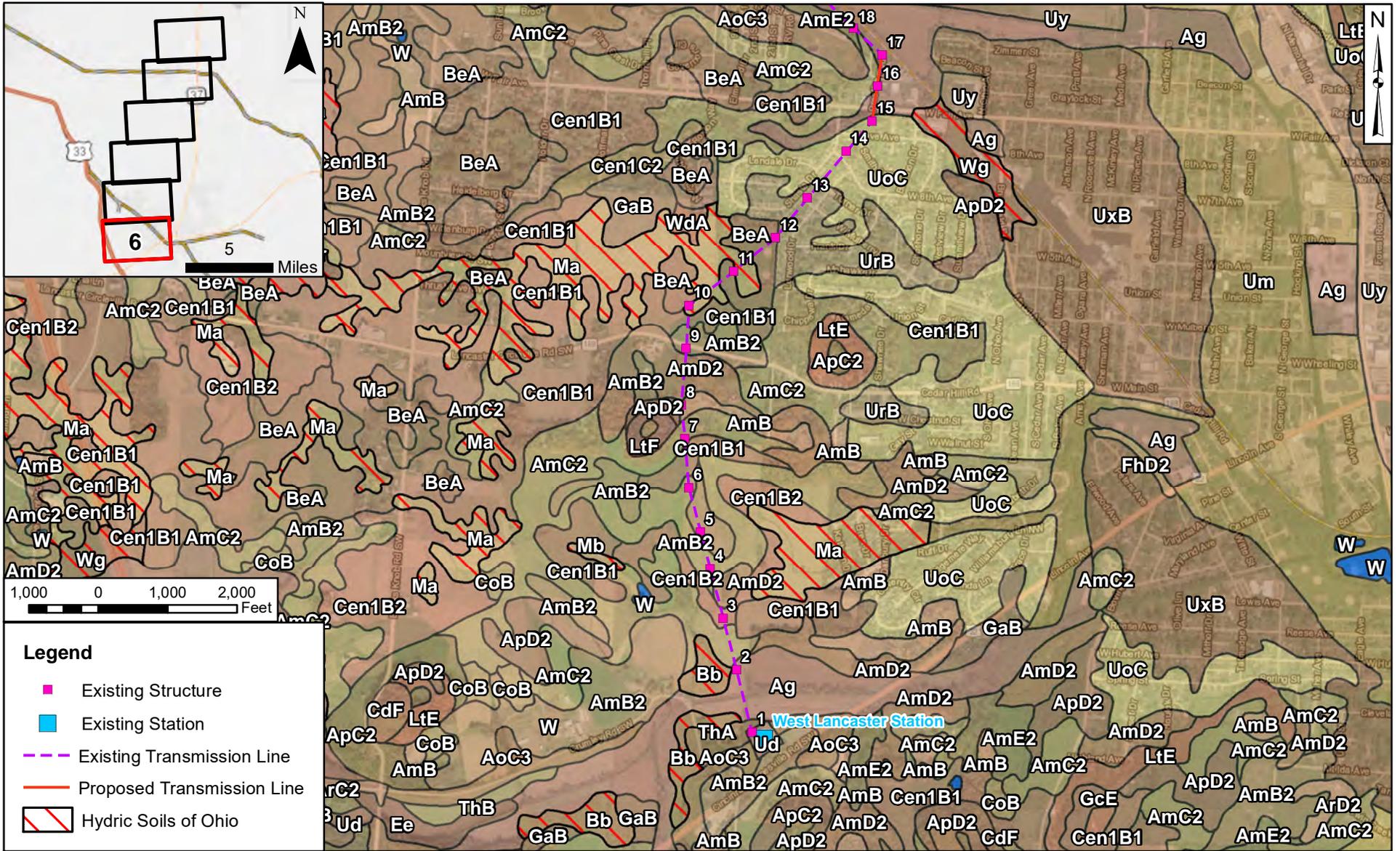
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SCALE:	See Scale Bar

CLIENT:	American Electric Power 8600 Smiths Mill Road New Albany, Ohio 43054
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SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP	
West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
FIGURE:	3 Page 5 of 6



Legend

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Hydric Soils of Ohio

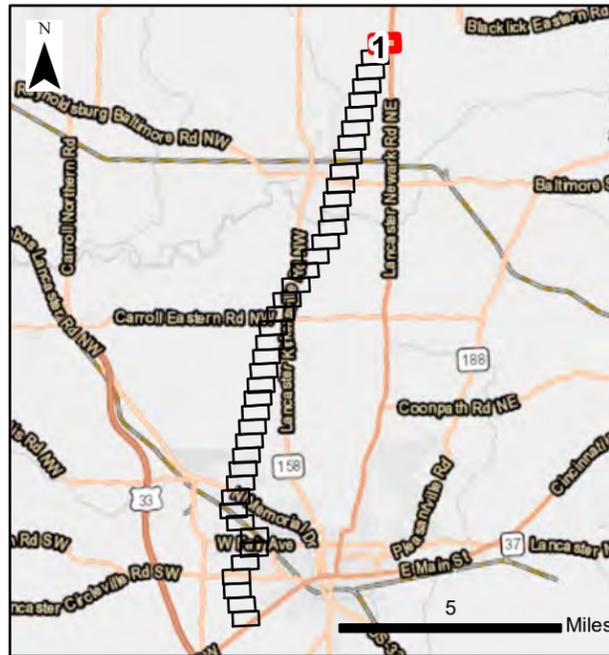
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SOIL SURVEY OF FAIRFIELD COUNTY, OH MAP		FIGURE:	3
West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio		Page 6 of 6	




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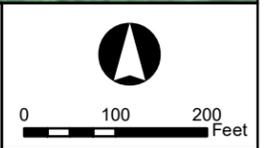
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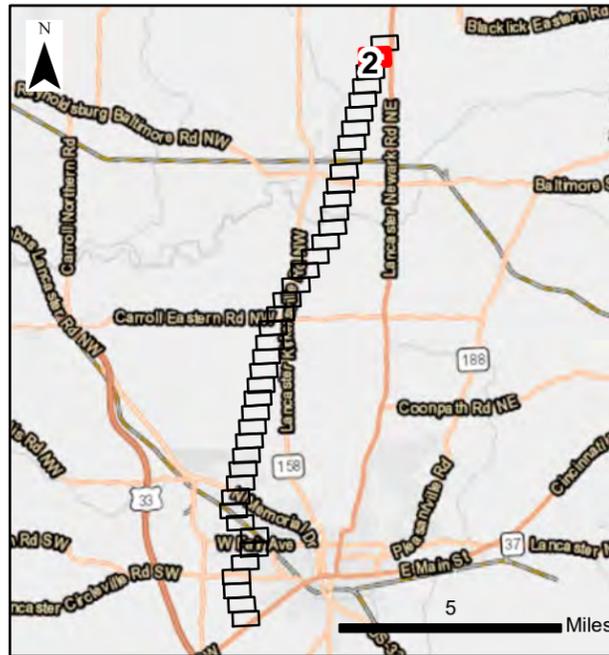
LEGEND:			
■ Existing Structure	■ Stormwater Inlet	- - Swale	→ Stream
■ Existing Station	◆ Existing Utility	- - Roadside Ditch	■ Pond
- - Existing Transmission Line	◆ Potential Obstacle	- - Guardrail	■ Wetland PEM
- - Proposed Transmission Line	● Existing Culvert	× - × Existing Fence	
- - Environmental Study Area	● Data Point	- - Gas Line	
● Distribution Pole	- - Topography	+++ Railroad	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 1 of 42




 8600 Smiths Mill Road
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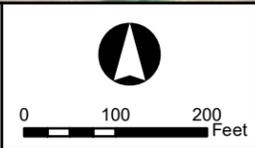
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DATE:
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 BASE LAYER:
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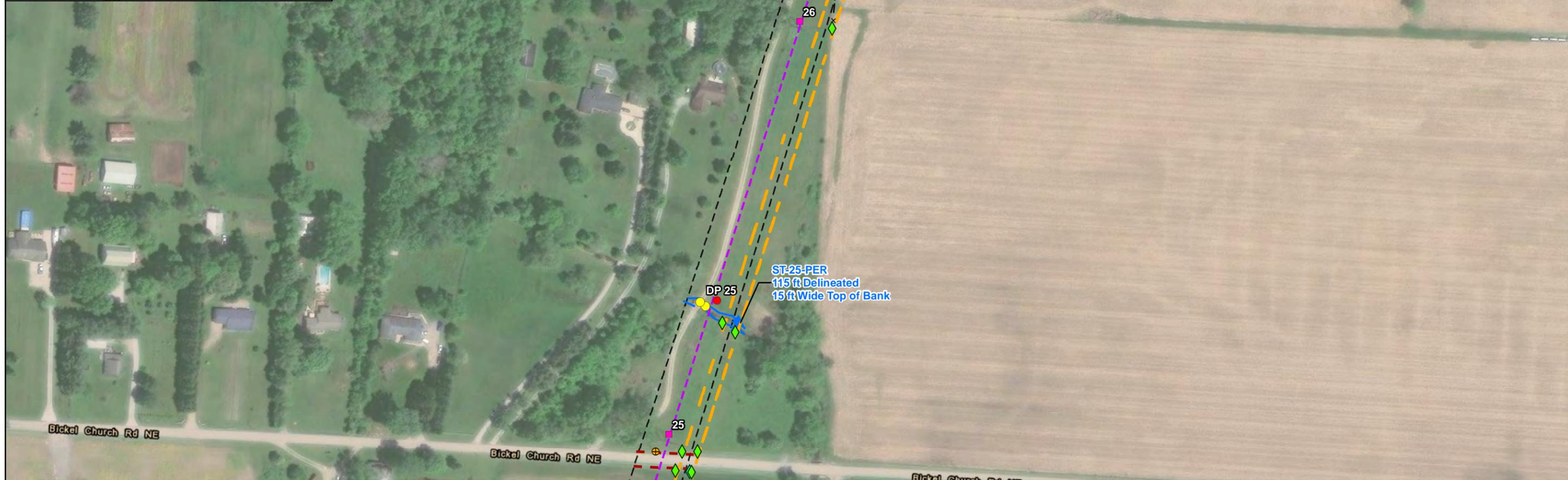
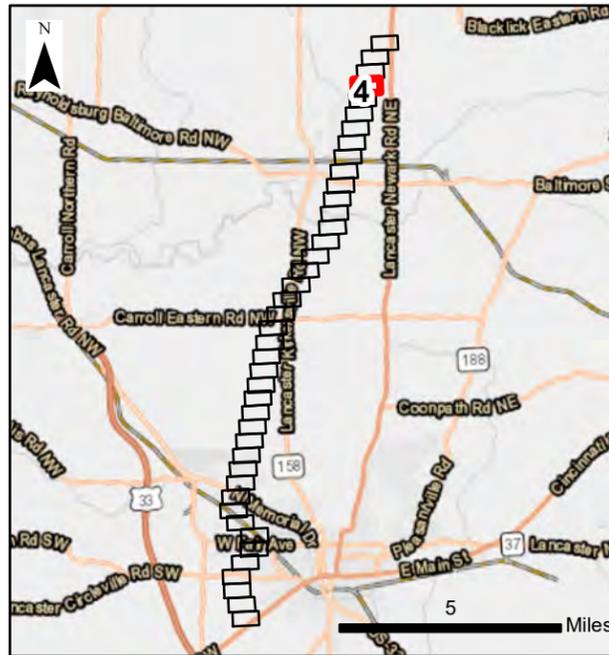
LEGEND:	
Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	
Pond	
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 2 of 42




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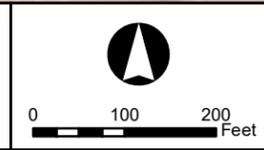
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DATE:
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 BASE LAYER:
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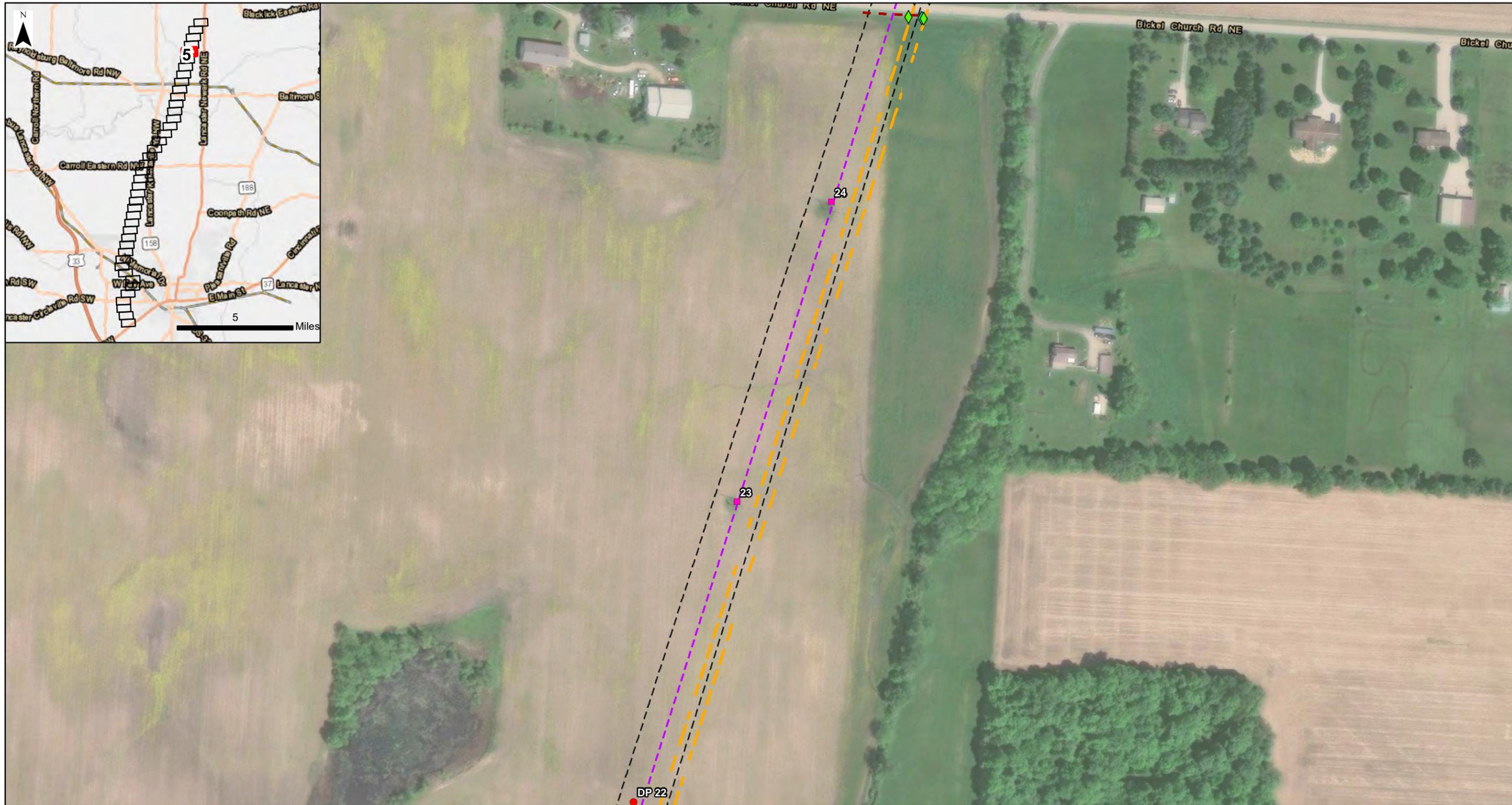
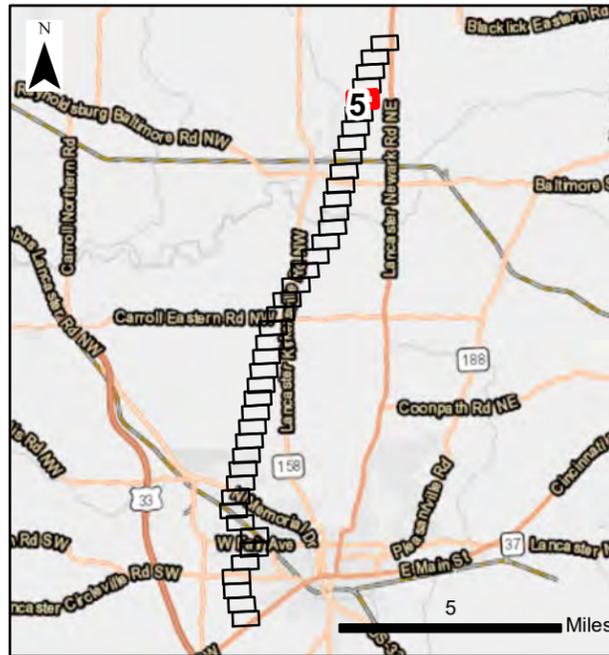
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	Existing Station		Existing Utility
	Existing Transmission Line		Potential Obstacle
	Proposed Transmission Line		Existing Culvert
	Environmental Study Area		Data Point
	Distribution Pole		Topography
	Swale		Roadside Ditch
	Guardrail		Existing Fence
	Stream		Gas Line
	Pond		Railroad
	Wetland PEM		

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 4 of 42




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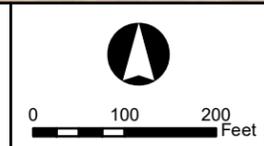

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DATE:
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 BASE LAYER:
 Aerial Imagery (2022)

LEGEND:							
	Existing Structure		Stormwater Inlet		Swale		Stream
	Existing Station		Existing Utility		Roadside Ditch		Pond
	Existing Transmission Line		Potential Obstacle		Guardrail		Wetland PEM
	Proposed Transmission Line		Existing Culvert		Existing Fence		
	Environmental Study Area		Data Point		Gas Line		
	Distribution Pole		Topography		Railroad		

TITLE:

DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 5 of 42




 8600 Smiths Mill Road
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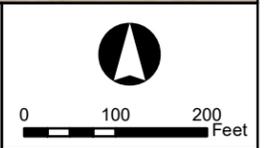
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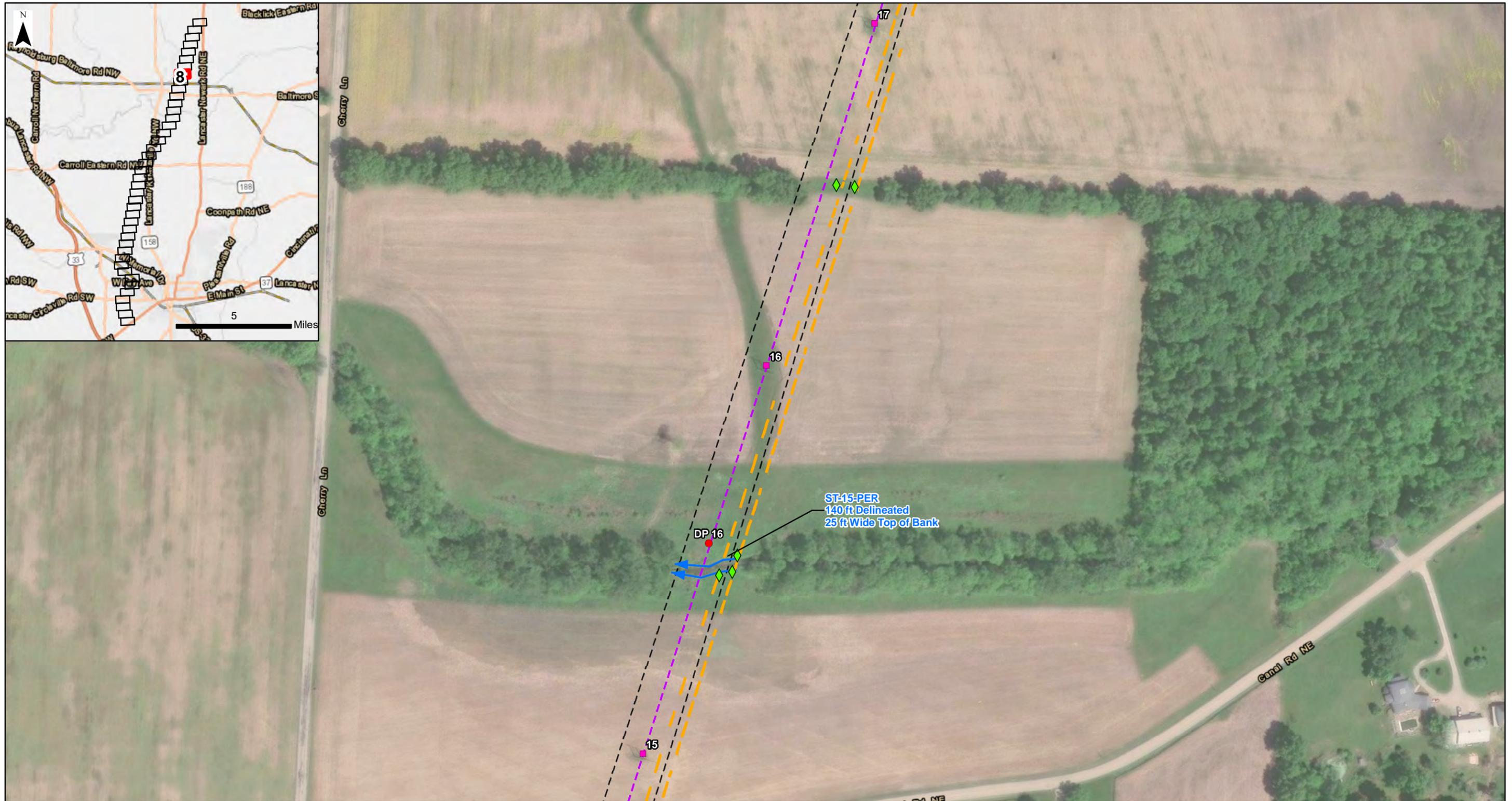
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 7 of 42




 8600 Smiths Mill Road
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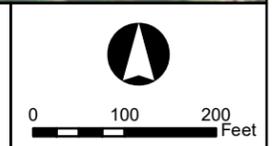
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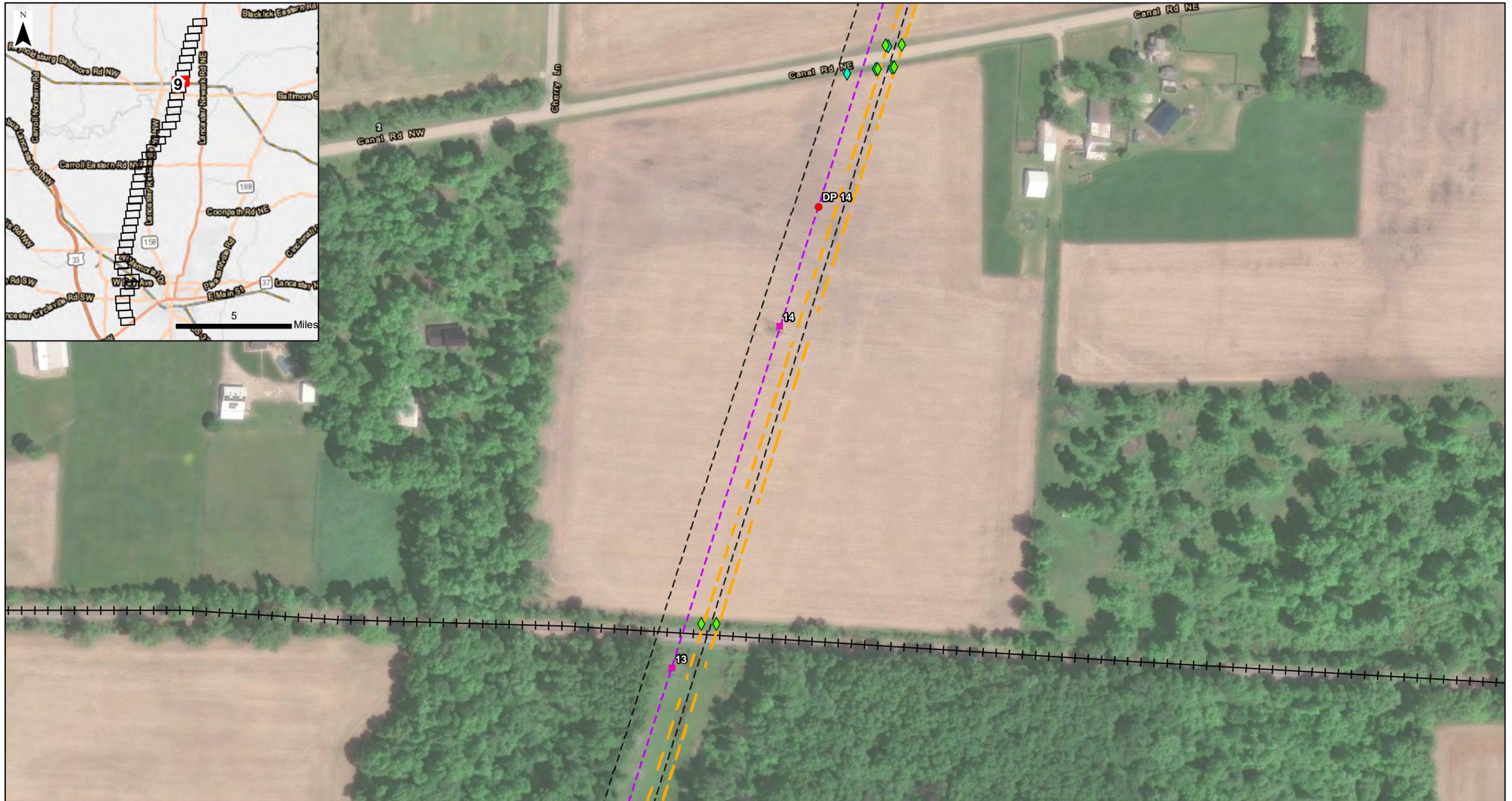
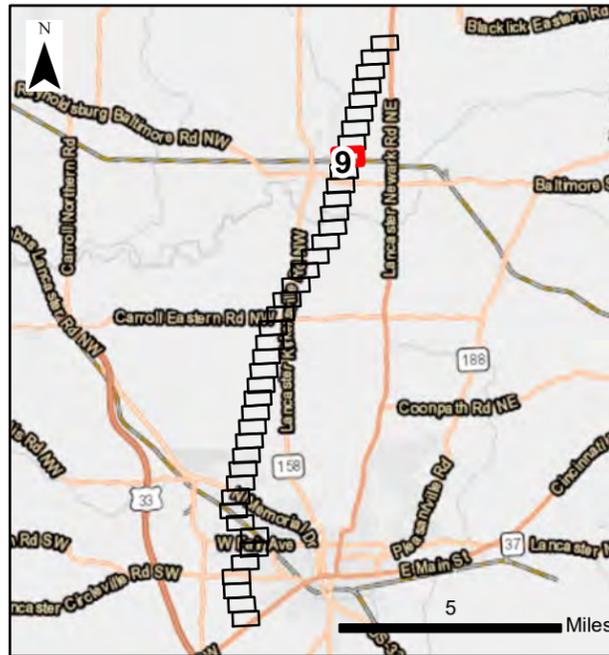
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 8 of 42




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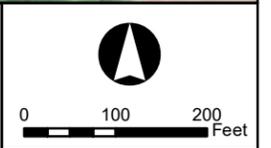
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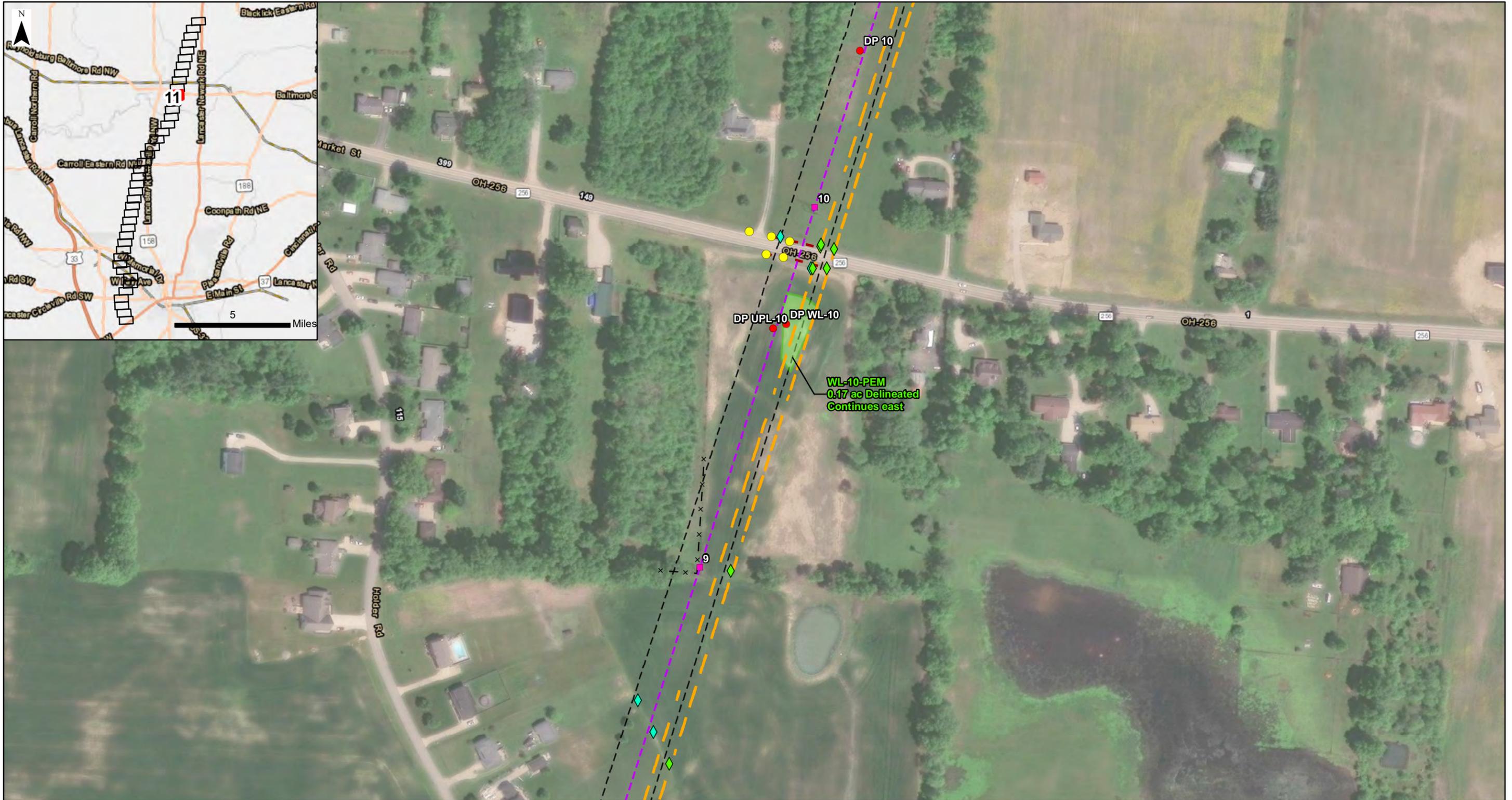
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Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 9 of 42



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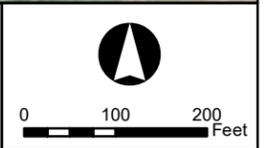
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DATE:
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BASE LAYER:
Aerial Imagery (2022)

LEGEND:	
■ Existing Structure	■ Stormwater Inlet
■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
● Distribution Pole	--- Topography
■ Swale	--- Roadside Ditch
--- Guardrail	--- Gas Line
× - × Existing Fence	+++ Railroad
→ Stream	■ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
Page 11 of 42




 8600 Smiths Mill Road
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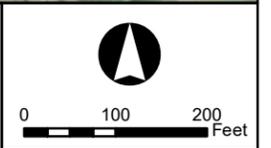

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DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

LEGEND:	
Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

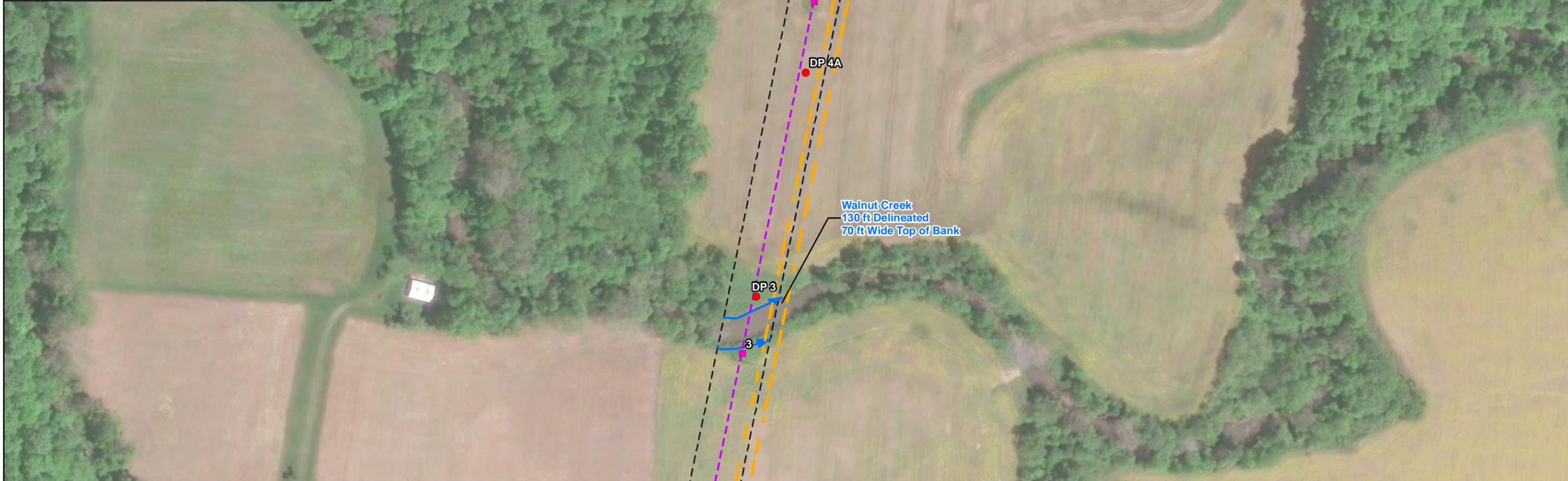
TITLE:

DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 12 of 42




 8600 Smiths Mill Road
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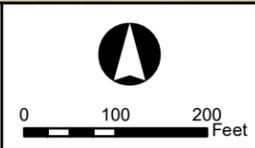
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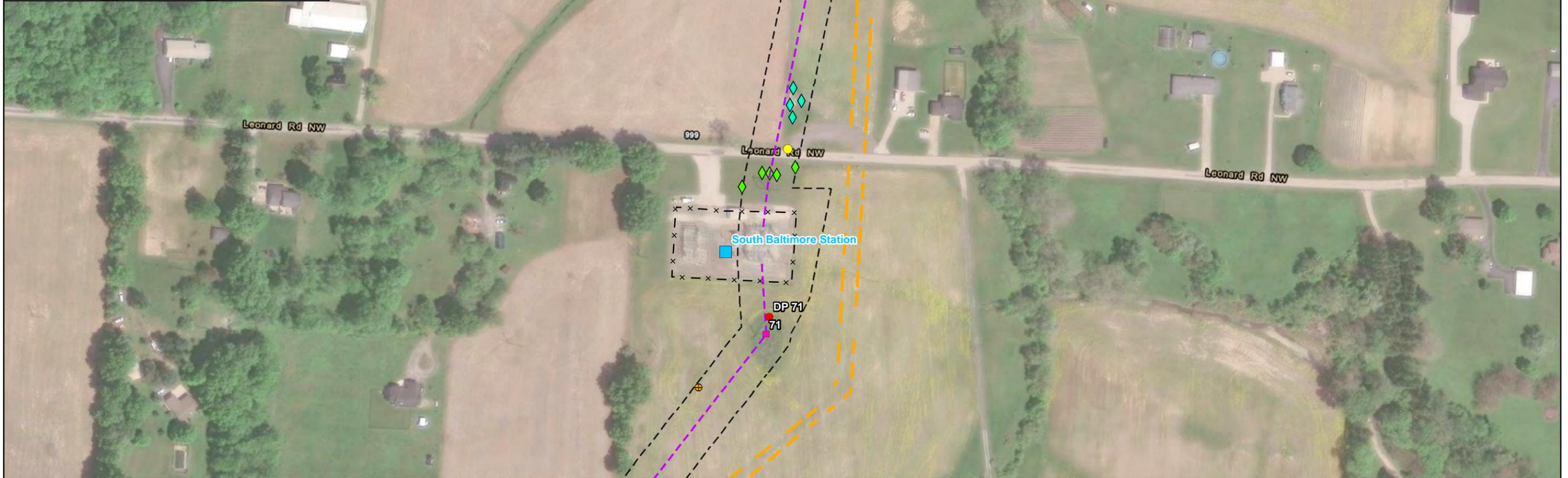
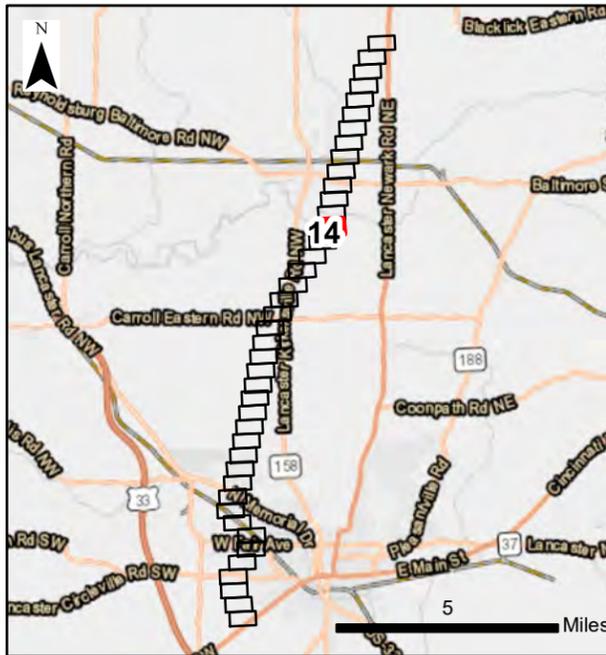
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 13 of 42




 8600 Smiths Mill Road
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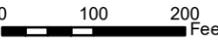

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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

TITLE:
DELINEATION MAP

SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio



 SCALE:
 1:2,400
 FIGURE:
4
Page 14 of 42




 8600 Smiths Mill Road
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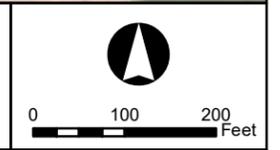
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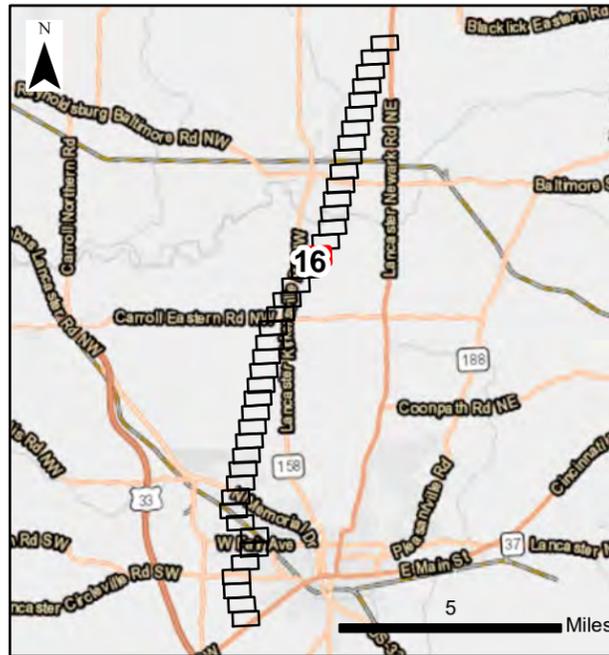
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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 8600 Smiths Mill Road
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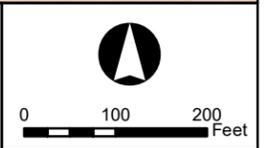
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DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

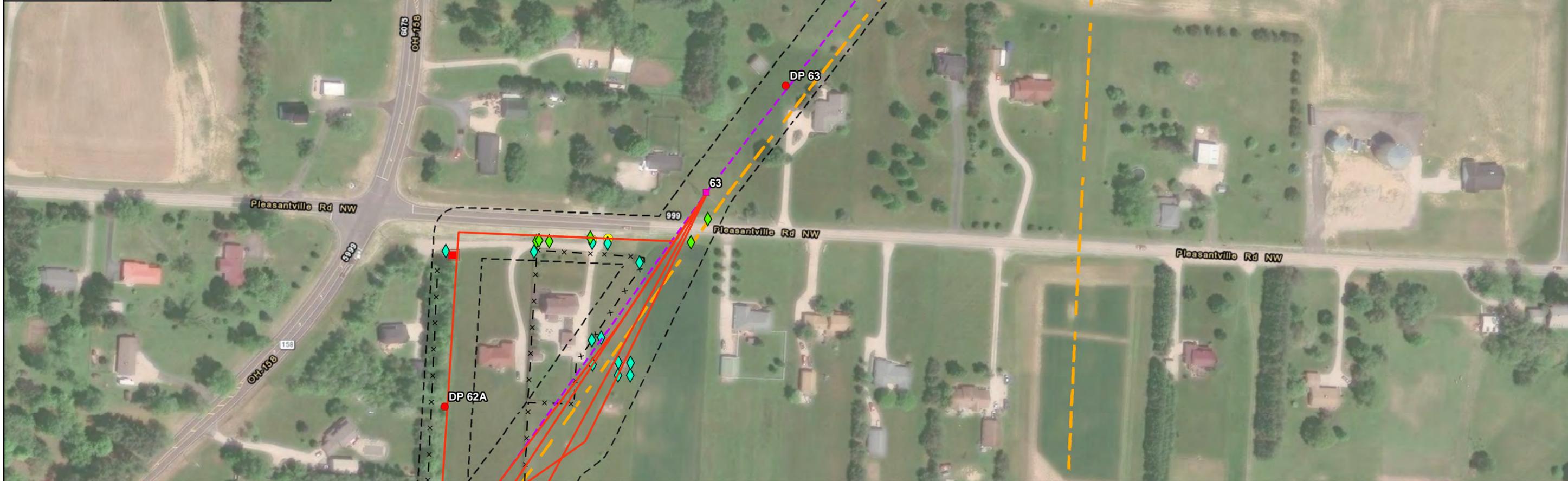
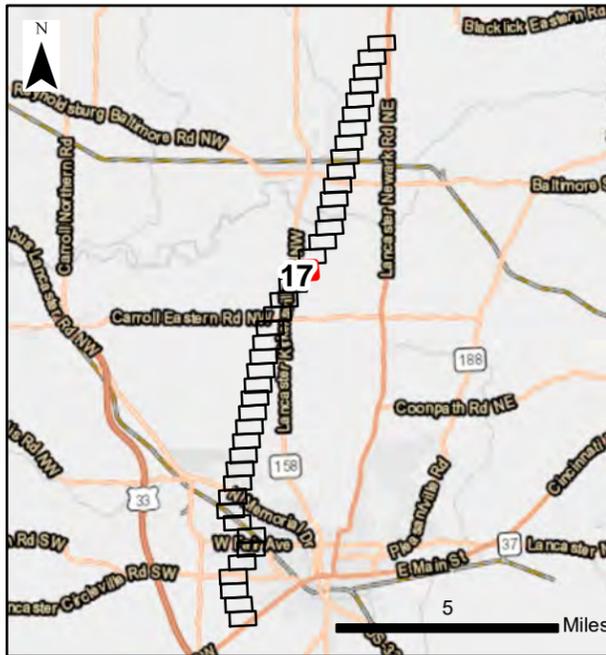
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Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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ST-63-EPH
150 ft Delineated
2 ft Wide Top of Bank

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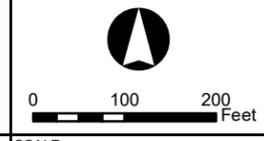
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210180.182
CREATED BY:
ODS

V3
619 N. Pennsylvania Street
Indianapolis, IN 46204
www.v3co.com

DATE:
04/28/2024
BASE LAYER:
Aerial Imagery (2022)

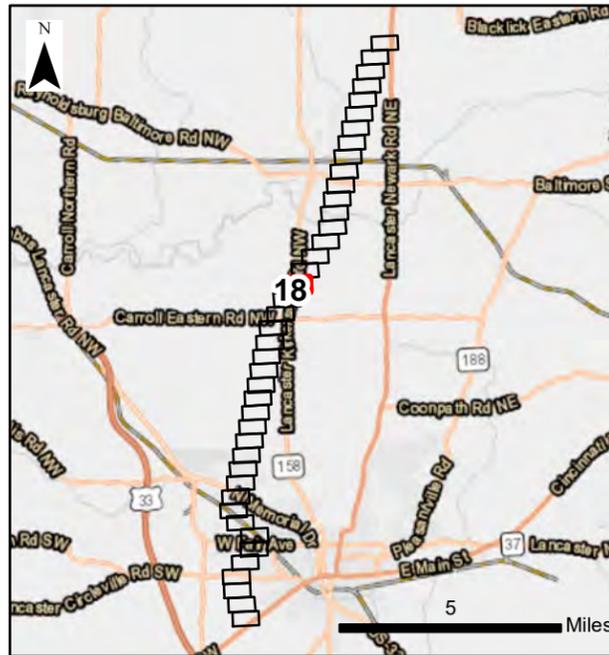
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
— Proposed Transmission Line	● Existing Culvert
- - - Environmental Study Area	● Data Point
⊕ Distribution Pole	- - Topography
— Swale	— Roadside Ditch
— Guardrail	× - × Existing Fence
— Gas Line	+++ Railroad
→ Stream	→ Pond
→ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
Page 17 of 42



AMERICAN ELECTRIC POWER
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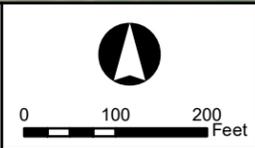
PROJECT NO.: 210180.182
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Indianapolis, IN 46204
www.v3co.com

DATE: 04/28/2024
BASE LAYER: Aerial Imagery (2022)

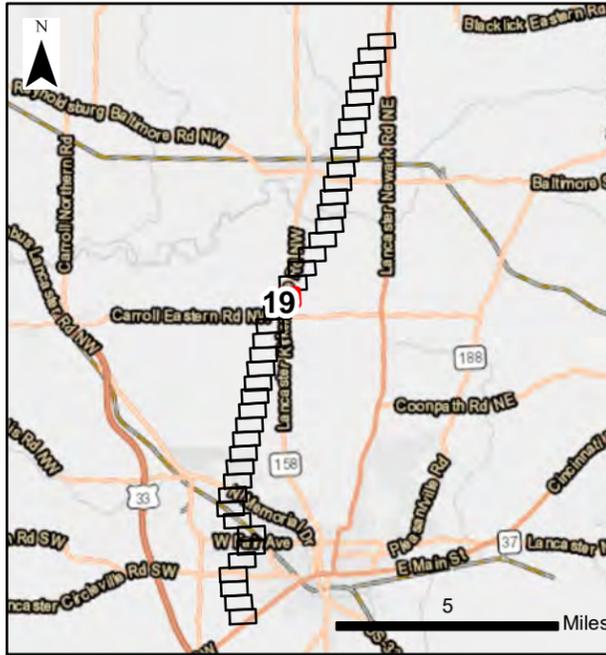
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
— Proposed Transmission Line	● Existing Culvert
- - - Environmental Study Area	● Data Point
⊕ Distribution Pole	- - Topography
■ Swale	--- Roadside Ditch
--- Guardrail	× - × Existing Fence
— Gas Line	+++ Railroad
→ Stream	■ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE: 1:2,400
FIGURE: 4
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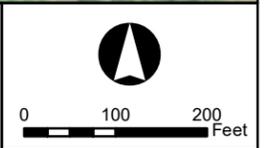
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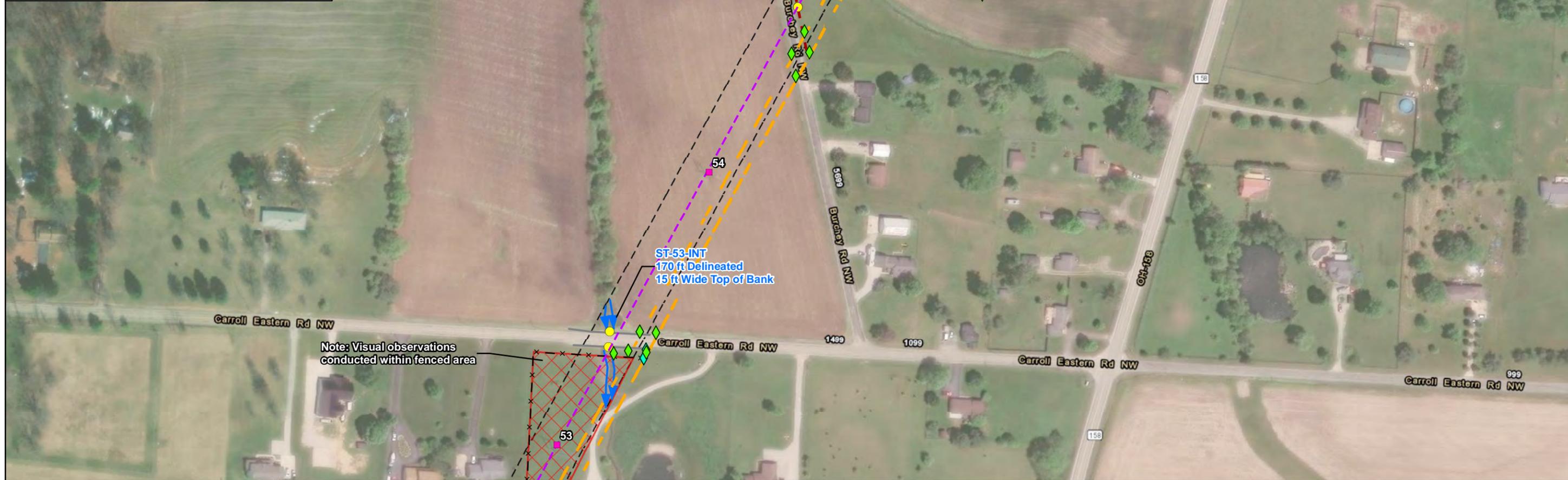
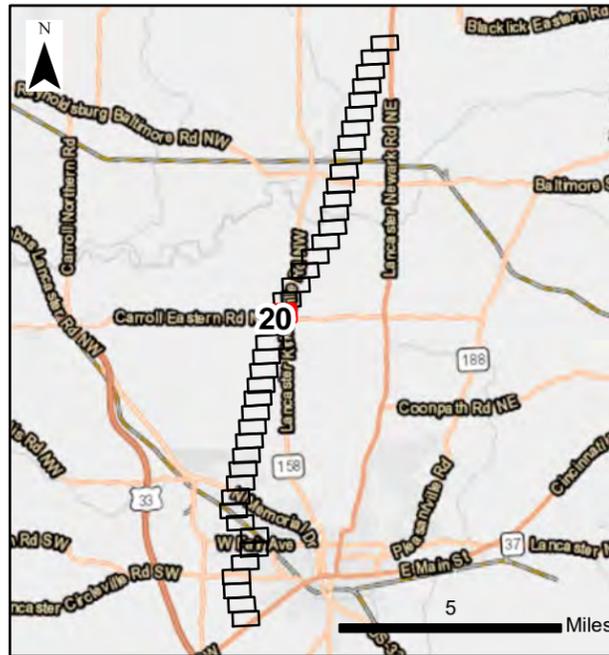
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
⊕ Distribution Pole	- - Topography
--- Swale	--- Roadside Ditch
--- Guardrail	× - × Existing Fence
--- Gas Line	+++ Railroad
→ Stream	→ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
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Note: Visual observations conducted within fenced area

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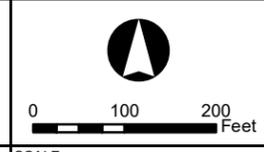
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619 N. Pennsylvania Street
Indianapolis, IN 46204
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DATE: 04/28/2024
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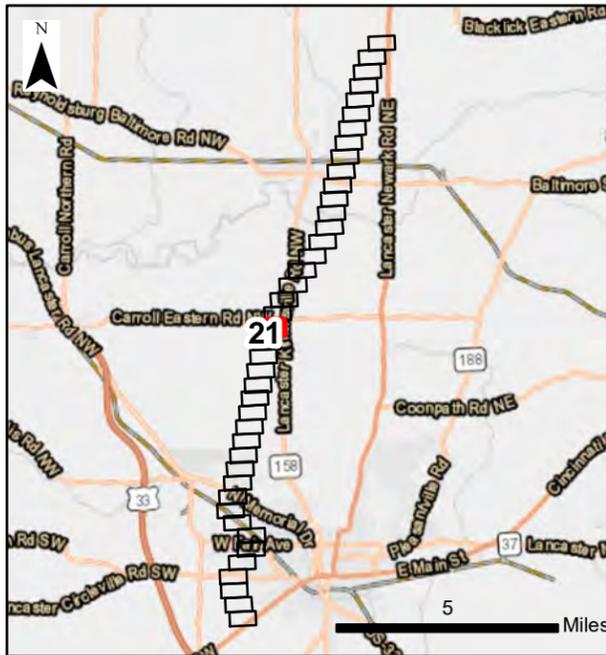
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
● Distribution Pole	--- Topography
■ Swale	--- Roadside Ditch
--- Guardrail	--- Existing Fence
--- Gas Line	+++ Railroad
→ Stream	■ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE: 1:2,400
FIGURE: 4
Page 20 of 42



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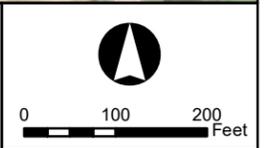
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DATE:
04/28/2024
BASE LAYER:
Aerial Imagery (2022)

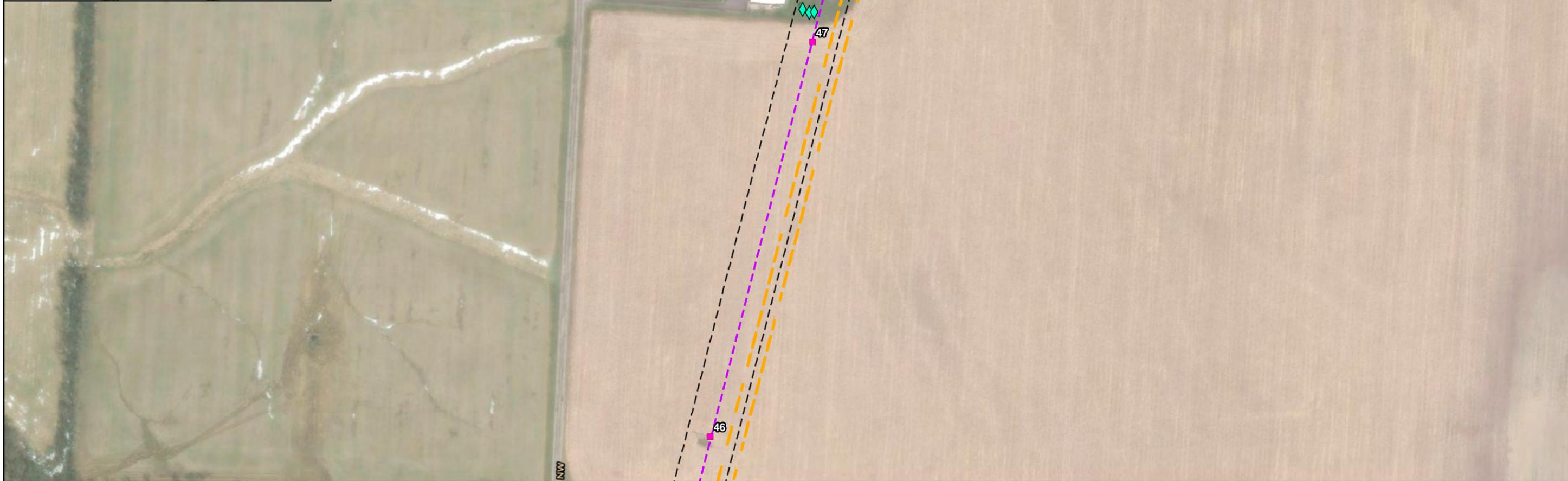
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
● Distribution Pole	--- Topography
--- Swale	--- Roadside Ditch
--- Guardrail	--- Existing Fence
--- Gas Line	+++ Railroad
→ Stream	→ Pond
→ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
Page 21 of 42




 8600 Smiths Mill Road
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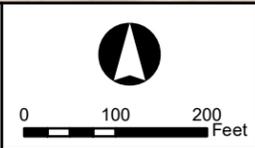
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 BASE LAYER:
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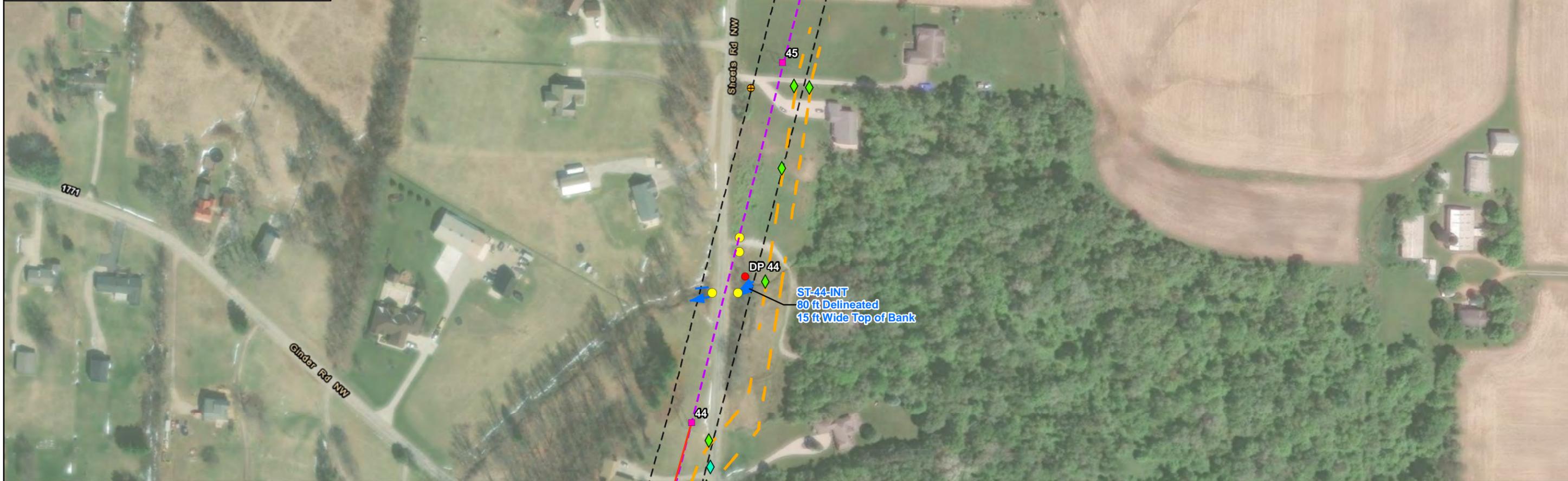
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Stream	Gas Line
Pond	Railroad
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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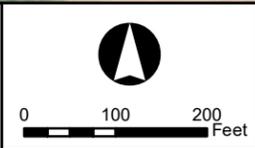
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DATE:
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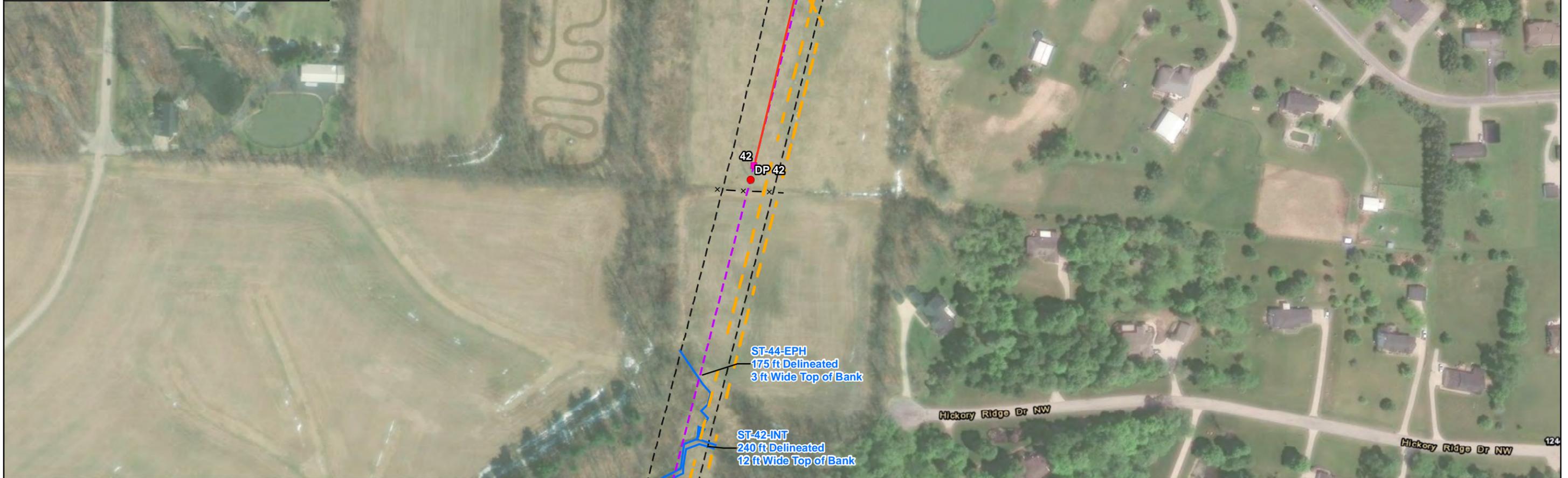
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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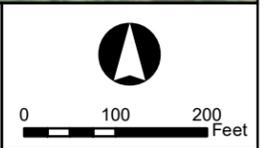
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DATE:
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Aerial Imagery (2022)

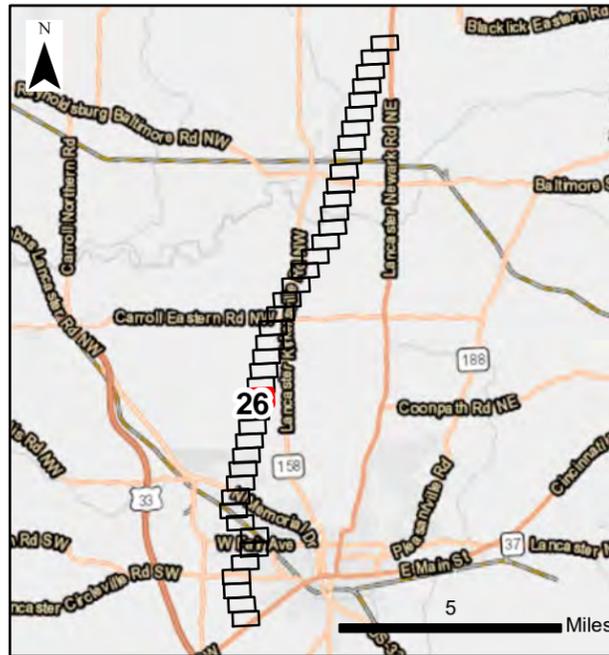
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
● Distribution Pole	--- Topography
■ Swale	--- Roadside Ditch
--- Guardrail	--- Existing Fence
--- Gas Line	+++ Railroad
→ Stream	■ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
1:2,400
 FIGURE:
4
Page 25 of 42




 8600 Smiths Mill Road
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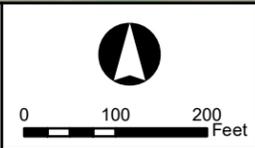

 619 N. Pennsylvania Street
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DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

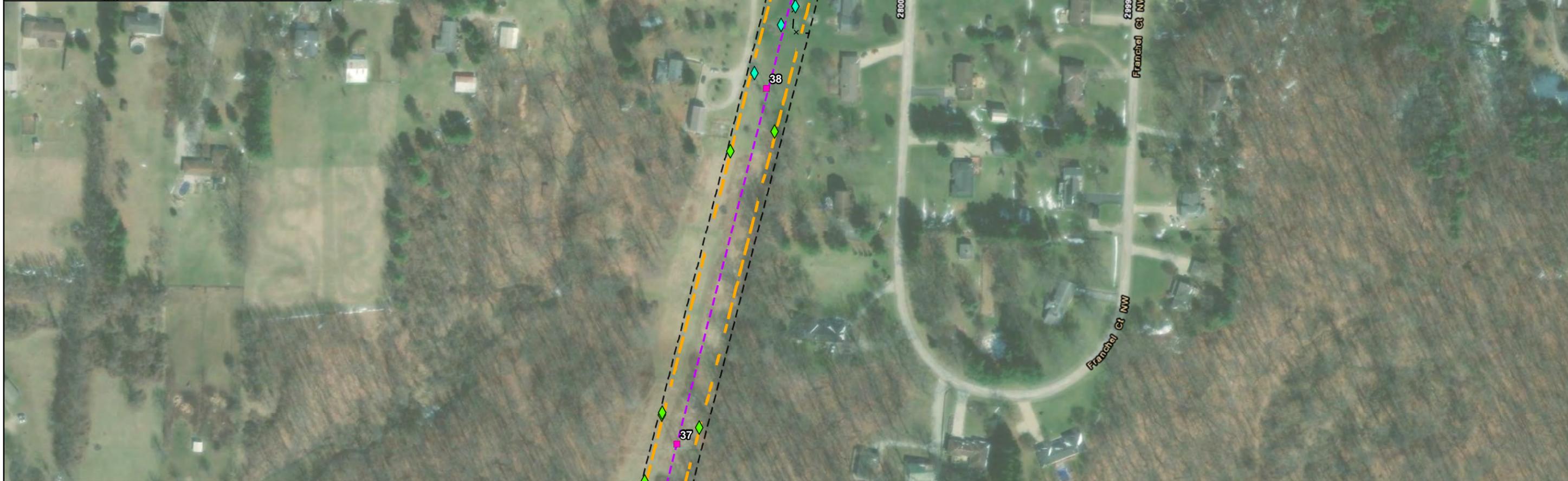
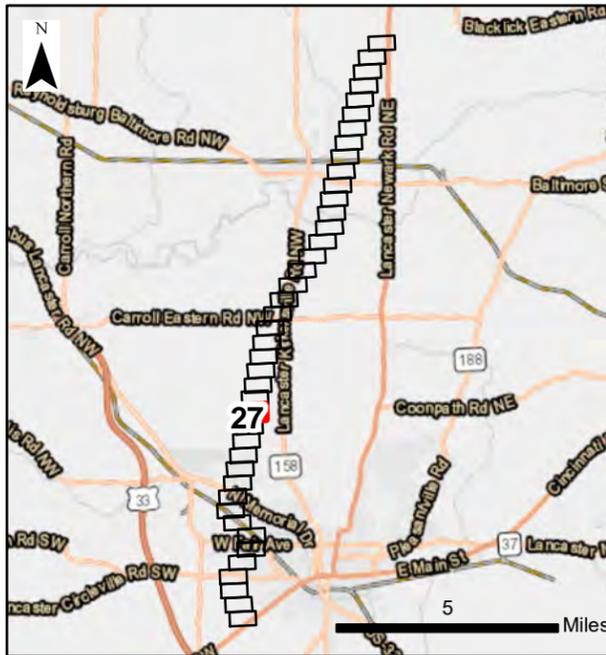
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DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 26 of 42



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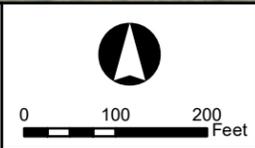
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210180.182
CREATED BY:
ODS

V3
619 N. Pennsylvania Street
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DATE:
04/28/2024
BASE LAYER:
Aerial Imagery (2022)

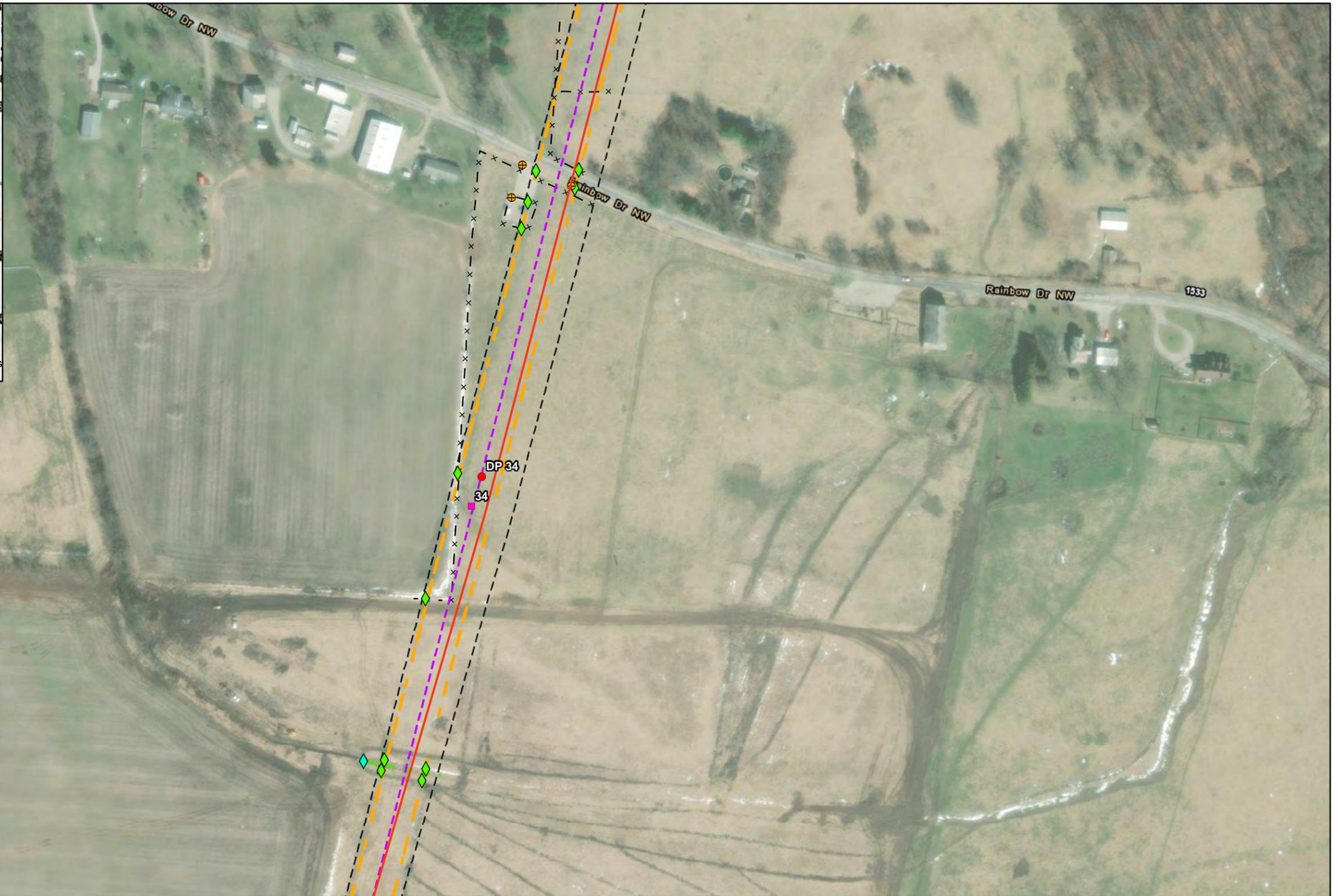
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
● Distribution Pole	--- Topography
■ Swale	--- Roadside Ditch
--- Guardrail	--- Existing Fence
--- Gas Line	+++ Railroad
▶ Stream	■ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
Page 27 of 42




 8600 Smiths Mill Road
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PROJECT NO.:
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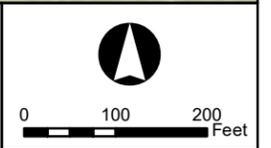

 619 N. Pennsylvania Street
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DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

LEGEND:	
Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

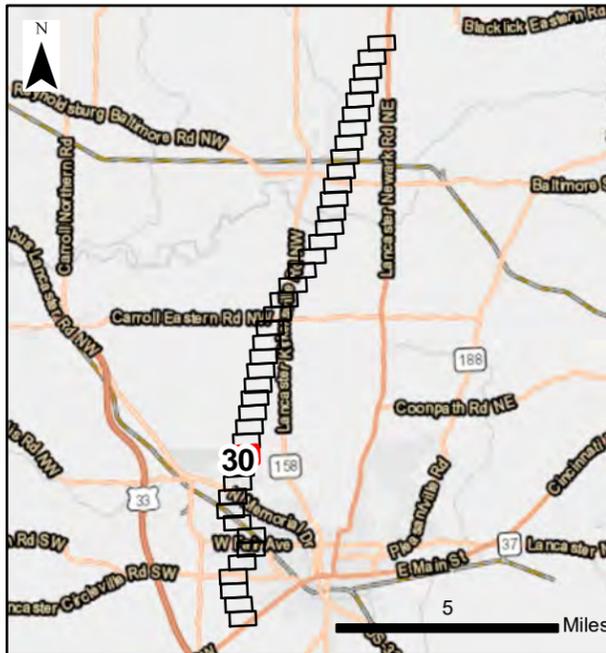
TITLE:

DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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Note: Encroachments within fenced areas not field verified - Structures 31 to 26

AMERICAN ELECTRIC POWER
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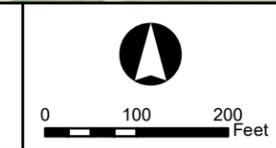
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CREATED BY: ODS

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619 N. Pennsylvania Street
Indianapolis, IN 46204
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DATE: 04/28/2024
BASE LAYER: Aerial Imagery (2022)

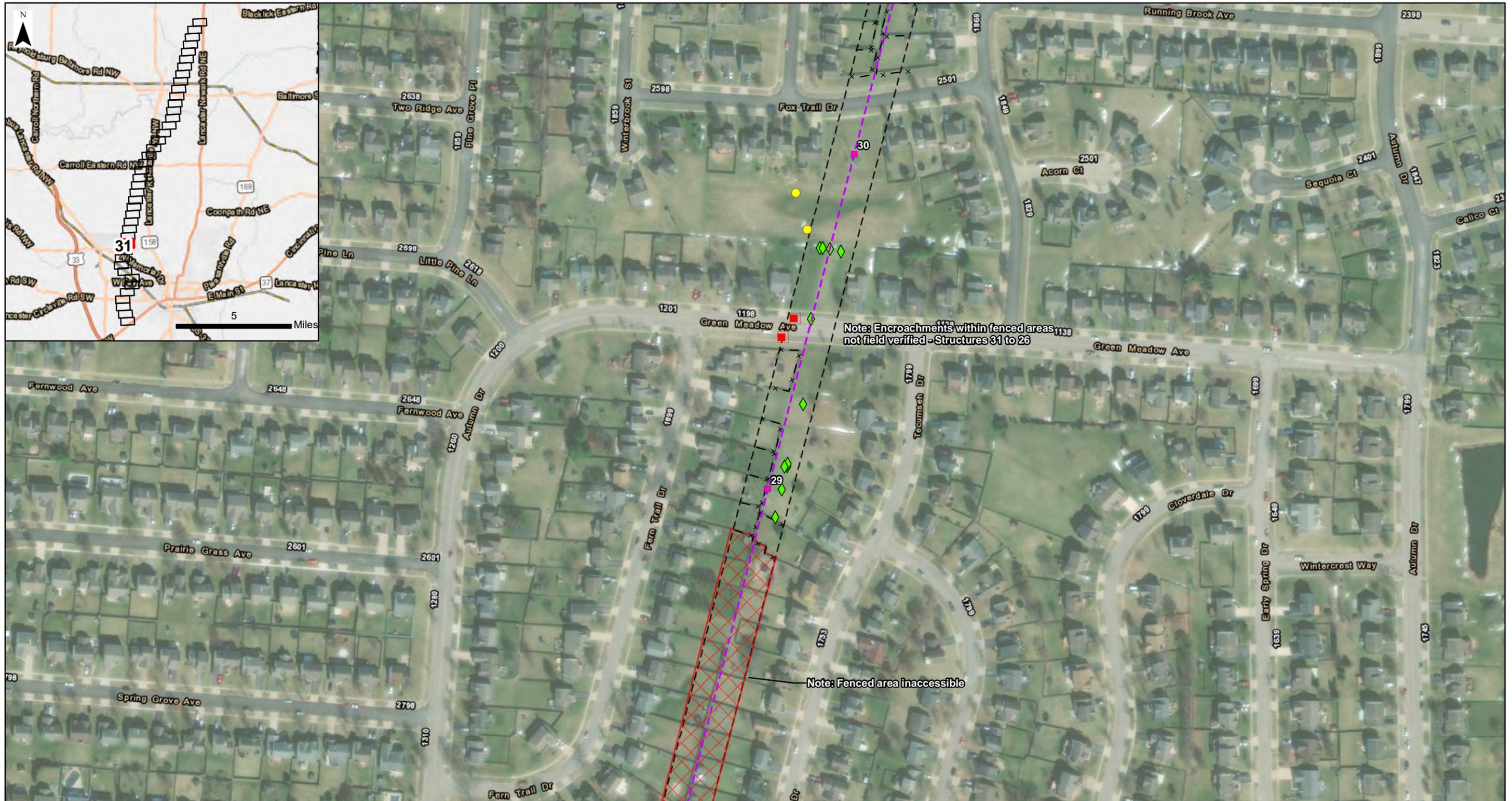
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■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
--- Environmental Study Area	● Data Point
⊕ Distribution Pole	--- Topography
--- Swale	--- Roadside Ditch
--- Guardrail	× × × Existing Fence
--- Gas Line	+++ Railroad
→ Stream	→ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE: 1:2,400
FIGURE: 4
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Note: Encroachments within fenced areas not field verified - Structures 31 to 26

Note: Fenced area inaccessible

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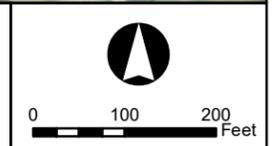
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Indianapolis, IN 46204
www.v3co.com

DATE:
04/28/2024
BASE LAYER:
Aerial Imagery (2022)

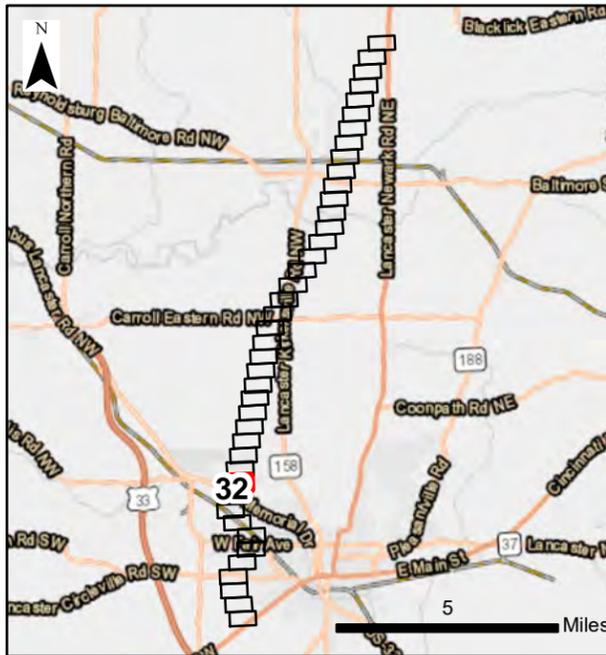
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■ Existing Station	◆ Existing Utility	- - Roadside Ditch	■ Pond
- - Existing Transmission Line	◆ Potential Obstacle	— Guardrail	■ Wetland PEM
— Proposed Transmission Line	● Existing Culvert	x - x Existing Fence	
- - - Environmental Study Area	● Data Point	— Gas Line	
● Distribution Pole	- - Topography	+++ Railroad	

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE:
1:2,400
FIGURE:
4
Page 31 of 42




 8600 Smiths Mill Road
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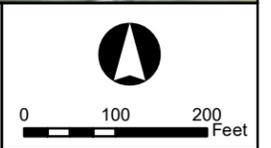
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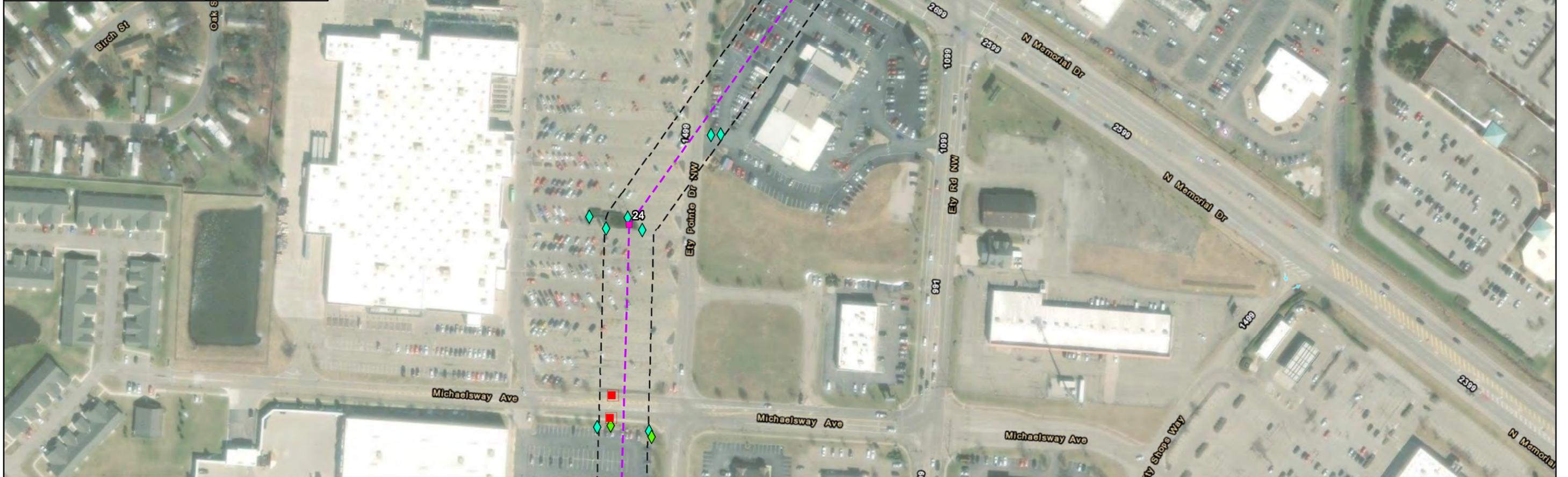
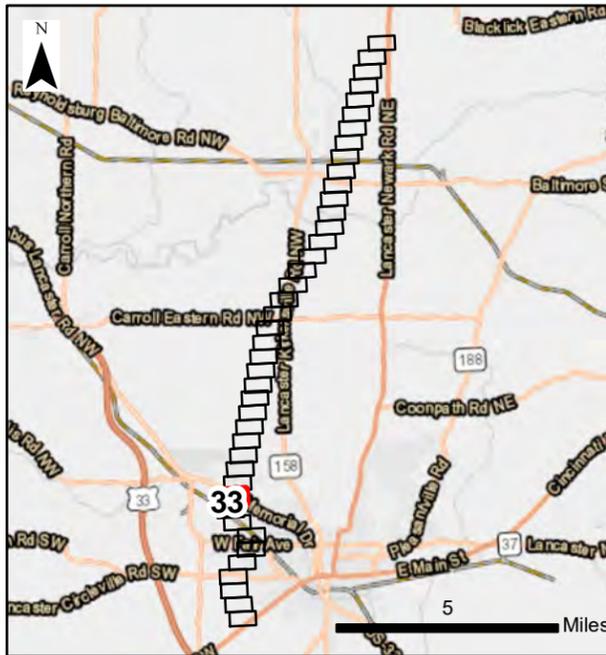
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Stormwater Inlet	Swale
Existing Utility	Roadside Ditch
Potential Obstacle	Guardrail
Existing Culvert	Existing Fence
Data Point	Gas Line
Topography	Railroad
Stream	Pond
	Wetland PEM

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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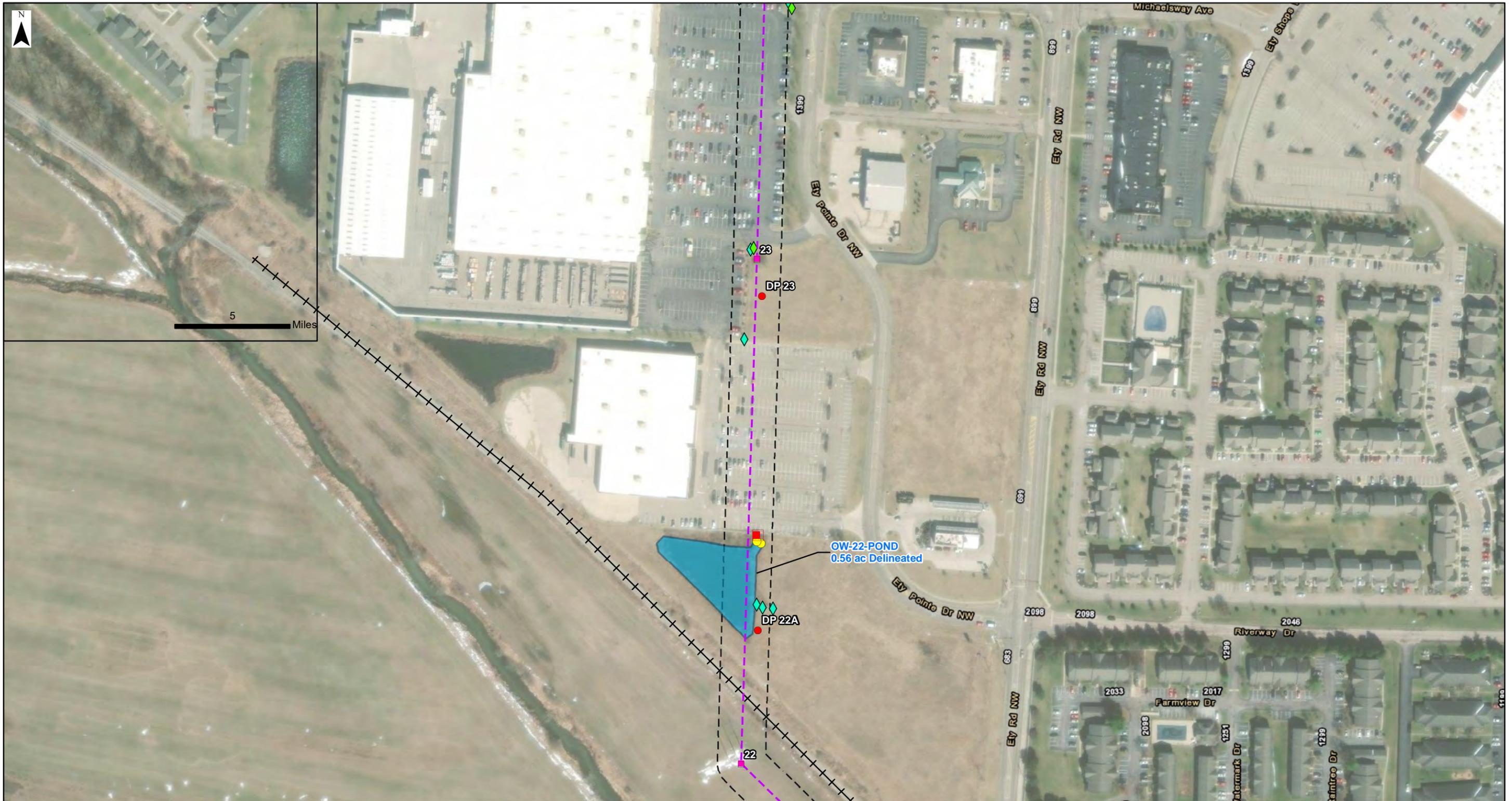
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	Potential Obstacle
	Existing Transmission Line
	Proposed Transmission Line
	Environmental Study Area
	Existing Culvert
	Data Point
	Distribution Pole
	Swale
	Roadside Ditch
	Guardrail
	Existing Fence
	Gas Line
	Topography
	Stream
	Pond
	Wetland PEM
	Railroad

TITLE:
DELINEATION MAP

SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio



 SCALE:
 1:2,400
 FIGURE:
4
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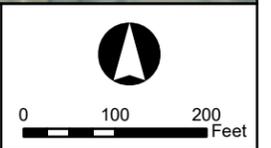
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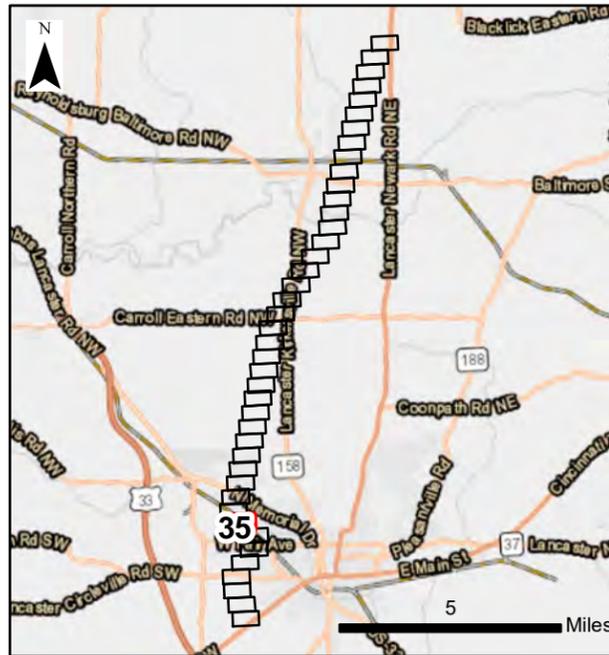
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Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Gas Line	Railroad
Stream	Pond
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
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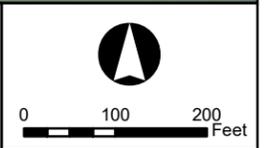
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 CREATED BY:
 ODS


 619 N. Pennsylvania Street
 Indianapolis, IN 46204
 www.v3co.com

DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

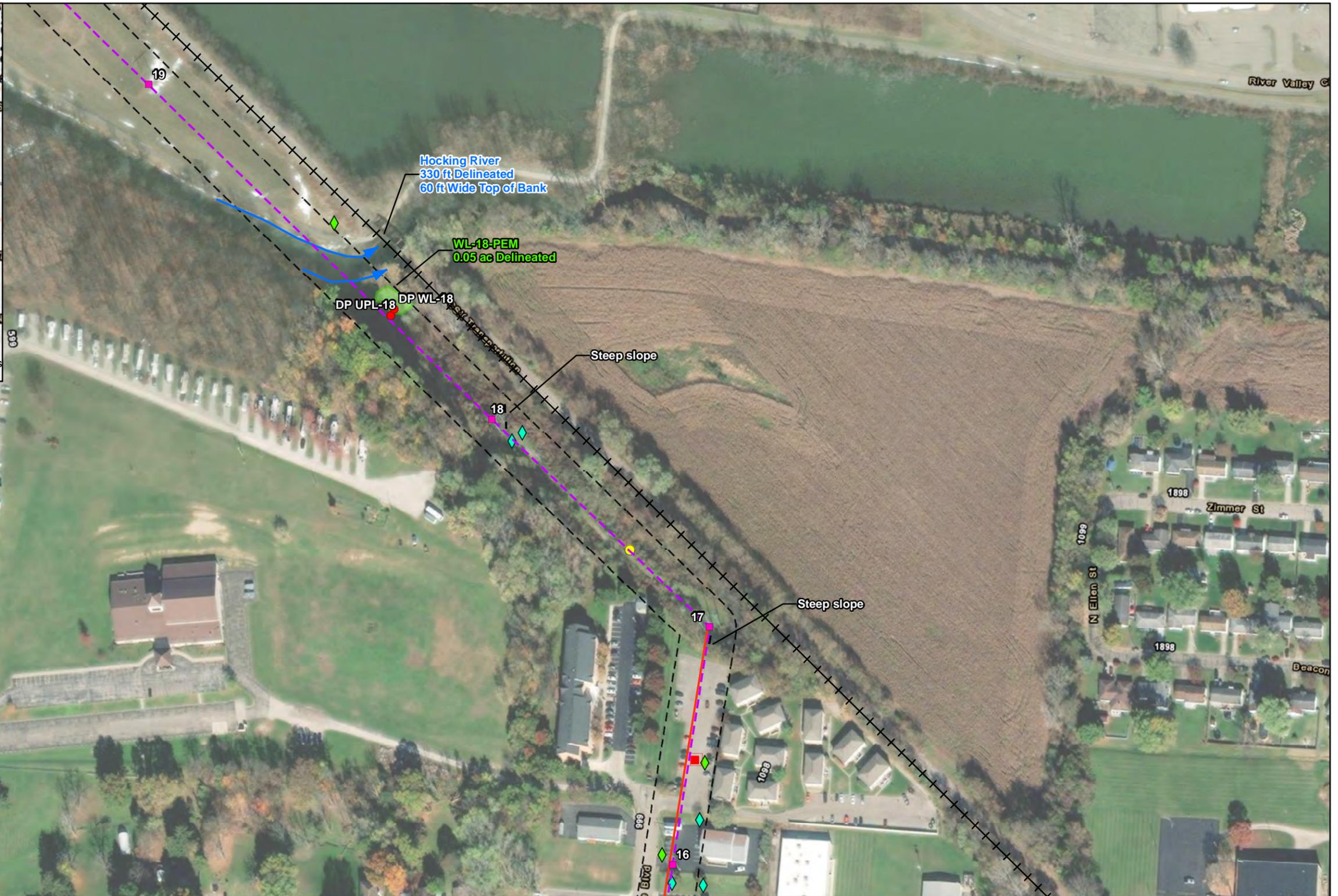
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	Existing Station		Existing Utility		Roadside Ditch		Pond
	Existing Transmission Line		Potential Obstacle		Guardrail		Wetland PEM
	Proposed Transmission Line		Existing Culvert		Existing Fence		
	Environmental Study Area		Data Point		Gas Line		
	Distribution Pole		Topography		Railroad		

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 35 of 42




 8600 Smiths Mill Road
 New Albany, Ohio 43054
 www.aep.com

PROJECT NO.:
 210180.182
 CREATED BY:
 ODS


 619 N. Pennsylvania Street
 Indianapolis, IN 46204
 www.v3co.com

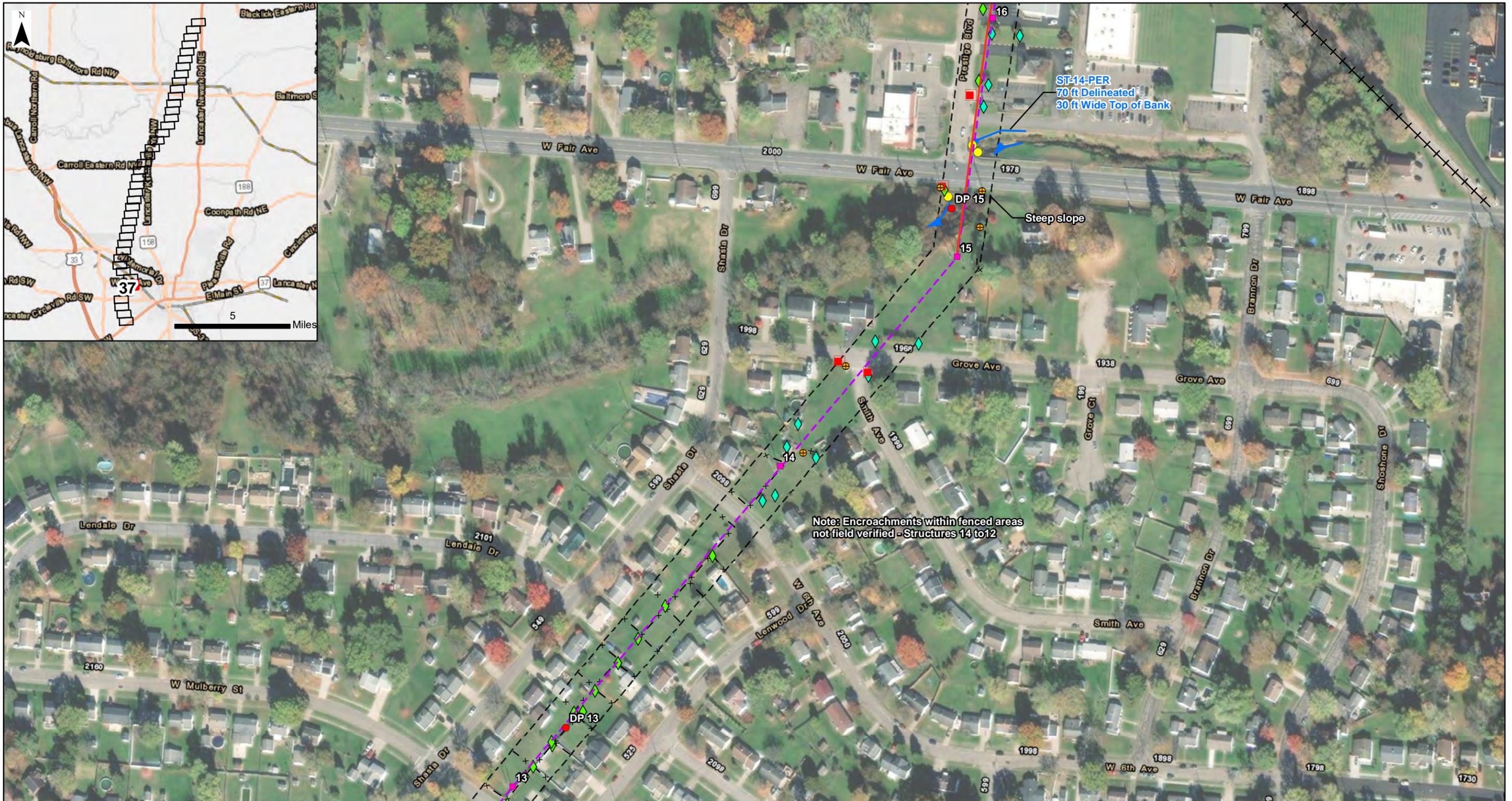
DATE:
 04/28/2024
 BASE LAYER:
 Aerial Imagery (2022)

LEGEND:	
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	Environmental Study Area
	Distribution Pole
	Stormwater Inlet
	Existing Utility
	Potential Obstacle
	Existing Culvert
	Data Point
	Topography
	Swale
	Roadside Ditch
	Guardrail
	Existing Fence
	Gas Line
	Railroad
	Stream
	Pond
	Wetland PEM

TITLE:
DELINEATION MAP

SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio


 0 100 200 Feet
 SCALE:
 1:2,400
 FIGURE:
4
Page 36 of 42



AMERICAN ELECTRIC POWER
8600 Smiths Mill Road
New Albany, Ohio 43054
www.aep.com

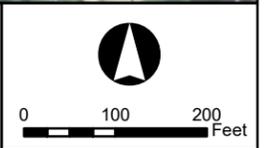
PROJECT NO.: 210180.182
CREATED BY: ODS

V3
619 N. Pennsylvania Street
Indianapolis, IN 46204
www.v3co.com

DATE: 04/28/2024
BASE LAYER: Aerial Imagery (2022)

LEGEND:	
Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Stream	Guardrail
Pond	Existing Fence
Wetland PEM	Gas Line
	Railroad

TITLE:
DELINEATION MAP



SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

SCALE: 1:2,400
FIGURE: 4
Page 37 of 42



AMERICAN ELECTRIC POWER
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PROJECT NO.: 210180.182
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V3
619 N. Pennsylvania Street
Indianapolis, IN 46204
www.v3co.com

DATE: 04/28/2024
BASE LAYER: Aerial Imagery (2022)

LEGEND:	
■ Existing Structure	■ Stormwater Inlet
■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
- - - Environmental Study Area	● Data Point
● Distribution Pole	- - Topography
■ Swale	--- Roadside Ditch
--- Guardrail	× - × Existing Fence
--- Gas Line	+++ Railroad
→ Stream	→ Pond
■ Wetland PEM	

TITLE:
DELINEATION MAP

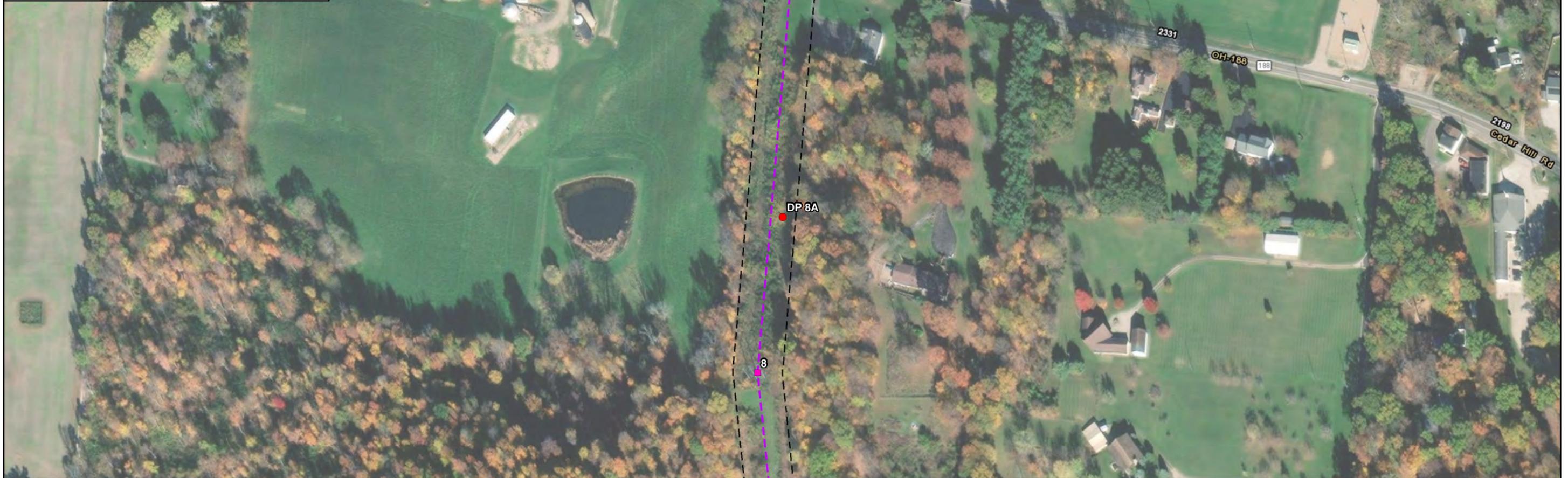
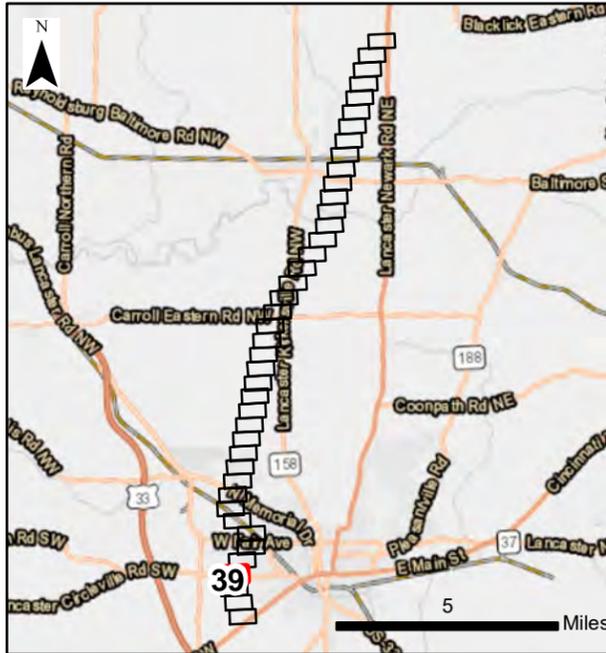
SITE:
West Lancaster – South Baltimore
– West Millersport 138kV Rebuild
Fairfield County, Ohio

0 100 200 Feet

SCALE: 1:2,400

FIGURE: 4

Page 38 of 42




 8600 Smiths Mill Road
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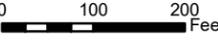
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 Aerial Imagery (2022)

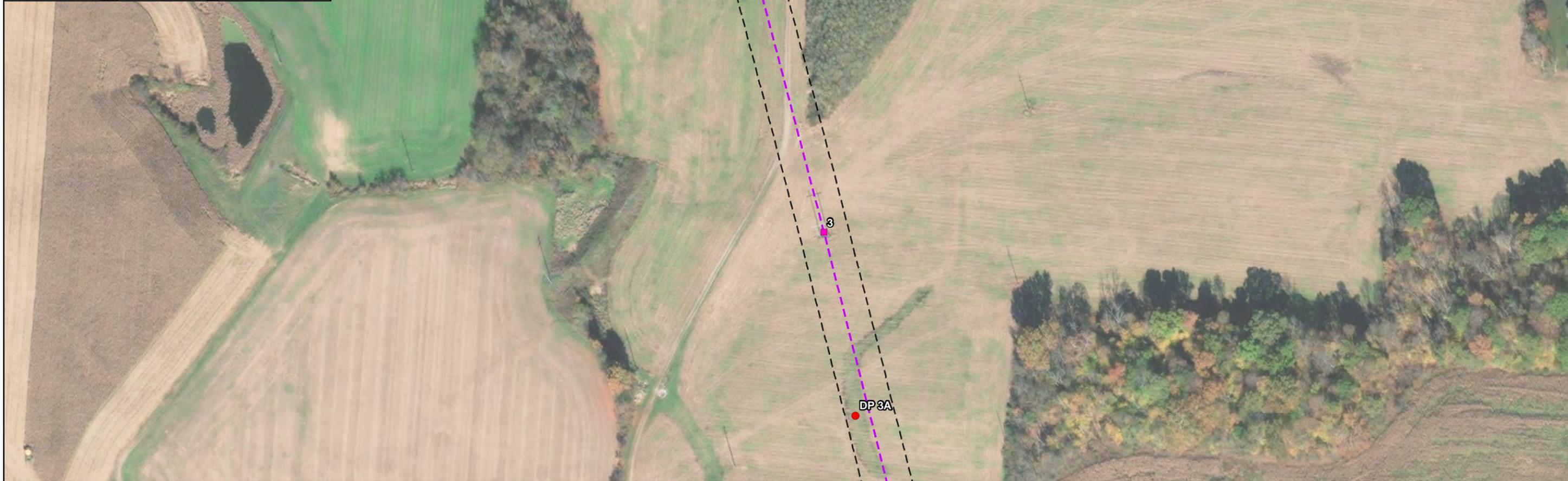
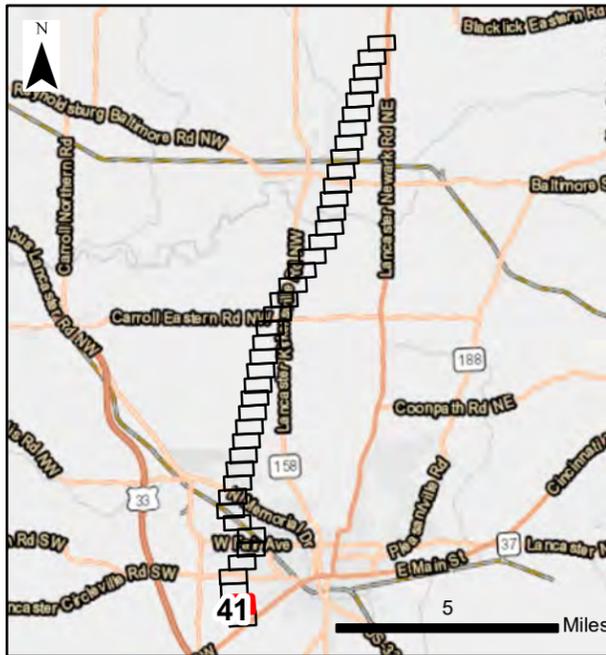
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	Stormwater Inlet
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	Stream
	Pond
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TITLE:

DELINEATION MAP

SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio



 SCALE:
 1:2,400
 FIGURE:
4
Page 39 of 42




 8600 Smiths Mill Road
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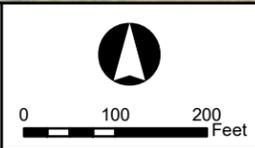
PROJECT NO.:
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 619 N. Pennsylvania Street
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DATE:
 04/28/2024
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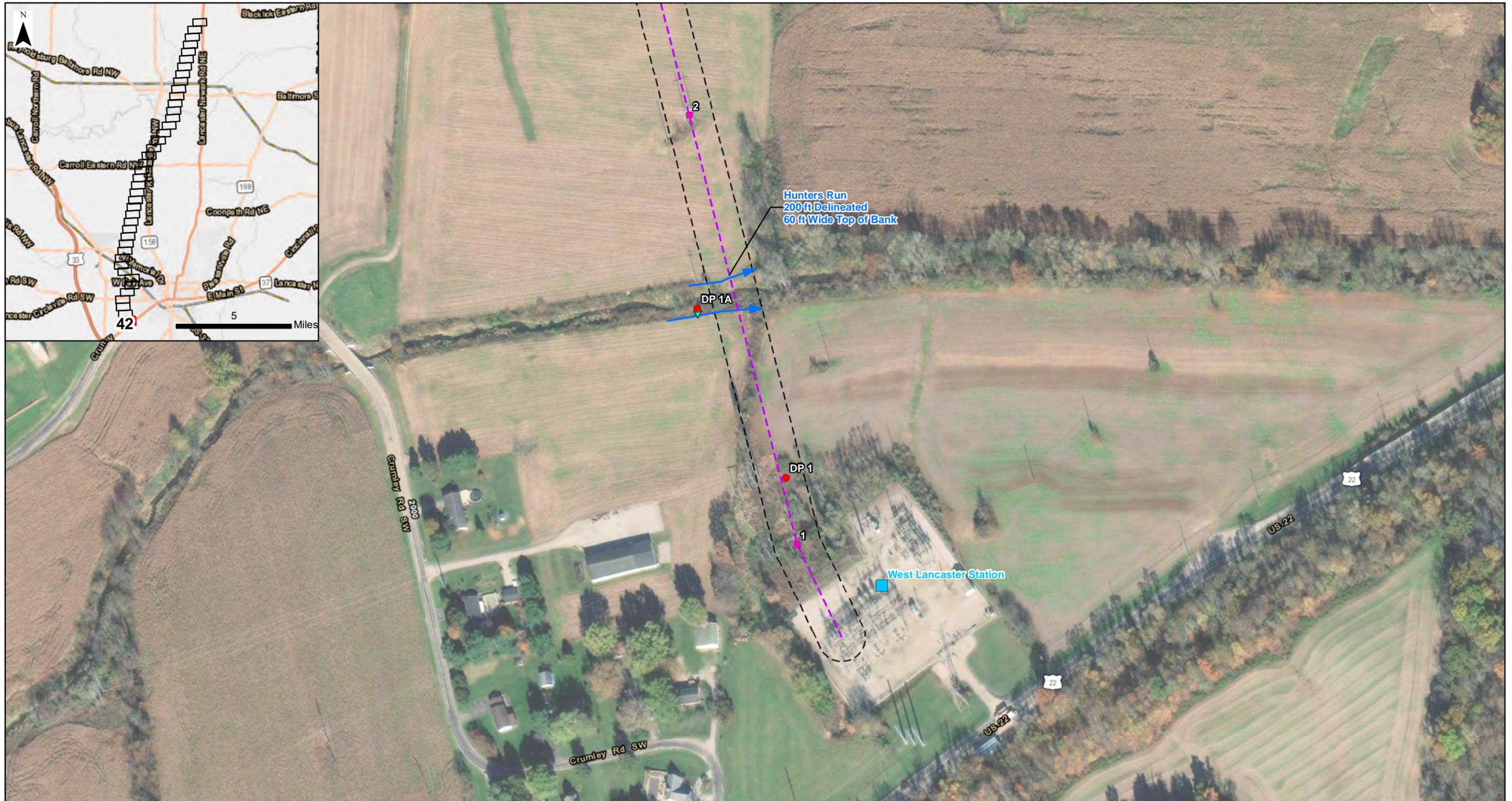
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Existing Structure	Stormwater Inlet
Existing Station	Existing Utility
Existing Transmission Line	Potential Obstacle
Proposed Transmission Line	Existing Culvert
Environmental Study Area	Data Point
Distribution Pole	Topography
Swale	Roadside Ditch
Guardrail	Existing Fence
Existing Fence	Gas Line
Stream	Railroad
Pond	
Wetland PEM	

TITLE:
DELINEATION MAP



SITE:
 West Lancaster – South Baltimore
 – West Millersport 138kV Rebuild
 Fairfield County, Ohio

SCALE:
 1:2,400
 FIGURE:
4
Page 41 of 42



AMERICAN ELECTRIC POWER
8600 Smiths Mill Road
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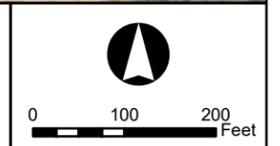
PROJECT NO.: 210180.182
CREATED BY: ODS

V3
619 N. Pennsylvania Street
Indianapolis, IN 46204
www.v3co.com

DATE: 04/28/2024
BASE LAYER: Aerial Imagery (2022)

LEGEND:	
■ Existing Structure	■ Stormwater Inlet
■ Existing Station	◆ Existing Utility
--- Existing Transmission Line	◆ Potential Obstacle
--- Proposed Transmission Line	● Existing Culvert
- - - Environmental Study Area	● Data Point
● Distribution Pole	- - Topography
■ Swale	- - Roadside Ditch
- - Guardrail	× - × Existing Fence
--- Gas Line	+++ Railroad
→ Stream	■ Pond
■ Wetland PEM	

TITLE: **DELINEATION MAP**



SITE: **West Lancaster – South Baltimore – West Millersport 138kV Rebuild
Fairfield County, Ohio**

SCALE: 1:2,400
FIGURE: 4
Page 42 of 42

Appendix A

ETR Species Correspondence Letters





United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To:

03/18/2024 20:18:46 UTC

Project Code: 2024-0064491

Project Name: West Lancaster – South Baltimore – West Millersport 138kV Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

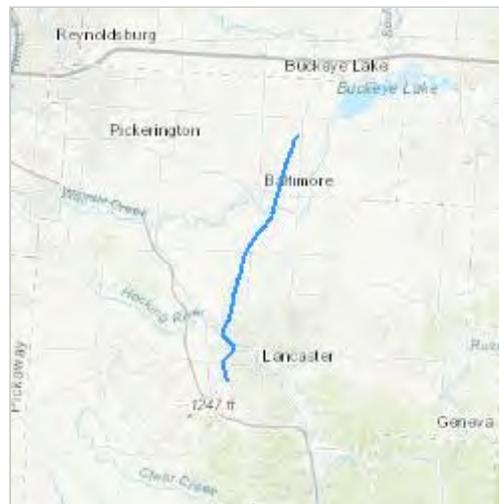
(614) 416-8993

PROJECT SUMMARY

Project Code: 2024-0064491
Project Name: West Lancaster – South Baltimore – West Millersport 138kV Rebuild
Project Type: Transmission Line - Maintenance/Modification - Above Ground
Project Description: AEP proposes to rebuild the West Lancaster – South Baltimore – West Millersport 138kV Transmission Line located in Liberty, Walnut, Greenfield, and Pleasant Township, Fairfield County Ohio. The project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.7632933,-82.63181485815679,14z>



Counties: Fairfield County, Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

REPTILES

NAME	STATUS
Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

CLAMS

NAME	STATUS
Round Hickorynut <i>Obovaria subrotunda</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9879	Threatened
Salamander Mussel <i>Simpsonaias ambigua</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6208	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: V3 Companies
Name: Olivia Speckman
Address: 619 N Pennsylvania Street
City: Indianapolis
State: IN
Zip: 46204
Email: ospeckman@v3co.com
Phone: 3174230690

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



April 17, 2024

Project Code: 2024-0064491

Dear Olivia Speckman:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

A handwritten signature in blue ink that reads "Erin Knoll". The signature is written in a cursive, flowing style.

Erin Knoll
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Eileen Wyza, ODNR-DOW



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
Tara Paciorek, Chief
2045 Morse Road – Bldg. E-2
Columbus, Ohio 43229
Phone: (614) 265-6661
Fax: (614) 267-4764

April 26, 2024

Olivia Speckman
V3 Companies
619 North Pennsylvania Street
Indianapolis, Indiana 46204

Re: 24-0500_West Lancaster - South Baltimore - West Millersport 138kV Rebuild

Project: The proposed project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

Location: The proposed project is located in Liberty, Walnut, Greenfield, and Pleasant townships, Fairfield County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data within one mile of the project area:

Cerulean Warbler (*Setophaga cerulea*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC
Great Blue Heron Rookery
Appalachian oak forest plant community
Oak-maple forest plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

The species and features listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#)." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional

malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, and the popeye shiner (*Notropis ariommus*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator

Appendix B

SITE Photographs



Photo: 1

WL-12-PEM

Direction of View:

North

Date:

27 March 2024



Photo: 2

WL-12-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 3

WL-12-PEM

Direction of View:

South

Date:

27 March 2024



Photo: 4

WL-12-PEM

Direction of View:

West

Date:

27 March 2024



Photo: 5

DP UPL-12

Direction of View:

North

Date:

27 March 2024



Photo: 6

DP UPL-12

Direction of View:

West

Date:

27 March 2024

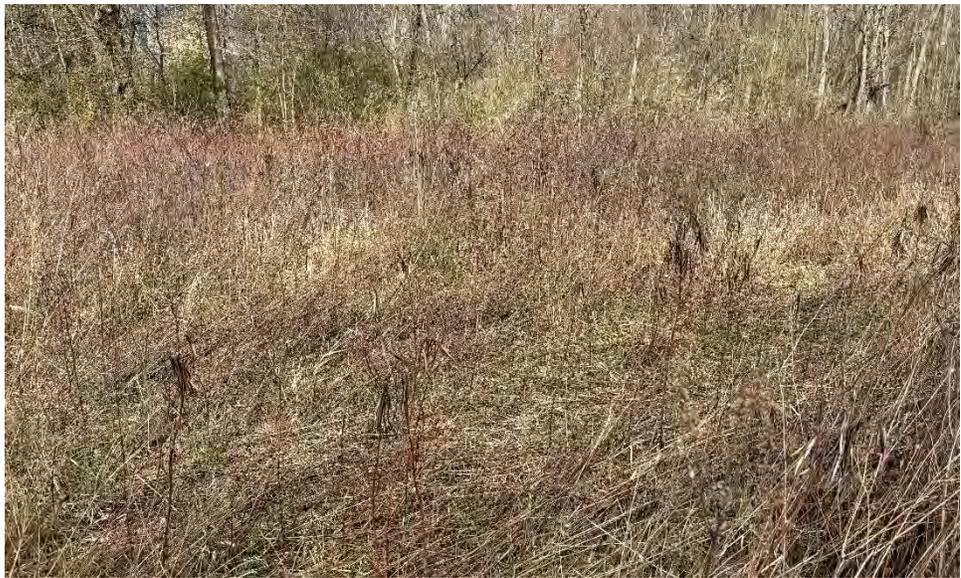


Photo: 7

WL-10-PEM

Direction of View:

North

Date:

27 March 2024



Photo: 8

WL-10-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 9

WL-10-PEM

Direction of View:

South

Date:

27 March 2024



Photo: 10

WL-10-PEM

Direction of View:

West

Date:

27 March 2024



Photo: 11

DP UPL-10

Direction of View:

North

Date:

27 March 2024



Photo: 12

DP UPL-10

Direction of View:

South

Date:

27 March 2024



Photo: 13

WL-5-PEM

Direction of View:

Northeast

Date:

27 March 2024



Photo: 14

WL-5-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 18

WL-5-PEM

Direction of View:

Southwest

Date:

27 March 2024



Photo: 16

WL-5-PEM

Direction of View:

West

Date:

28 March 2024



Photo: 17

DP UPL-5

Direction of View:

Southwest

Date:

27 March 2024



Photo: 18

WL-68-PEM

Direction of View:

North

Date:

27 March 2024



Photo: 19

WL-68-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 20

WL-68-PEM

Direction of View:

South

Date:

27 March 2024



Photo: 21

WL-68-PEM

Direction of View:

West

Date:

27 March 2024



Photo: 22

DP UPL-68

Direction of View:

North

Date:

27 March 2024



Photo: 23

DP UPL-68

Direction of View:

South

Date:

27 March 2024



Photo: 24

WL-60-PEM

DP WL-60

Direction of View:

North

Date:

27 March 2024

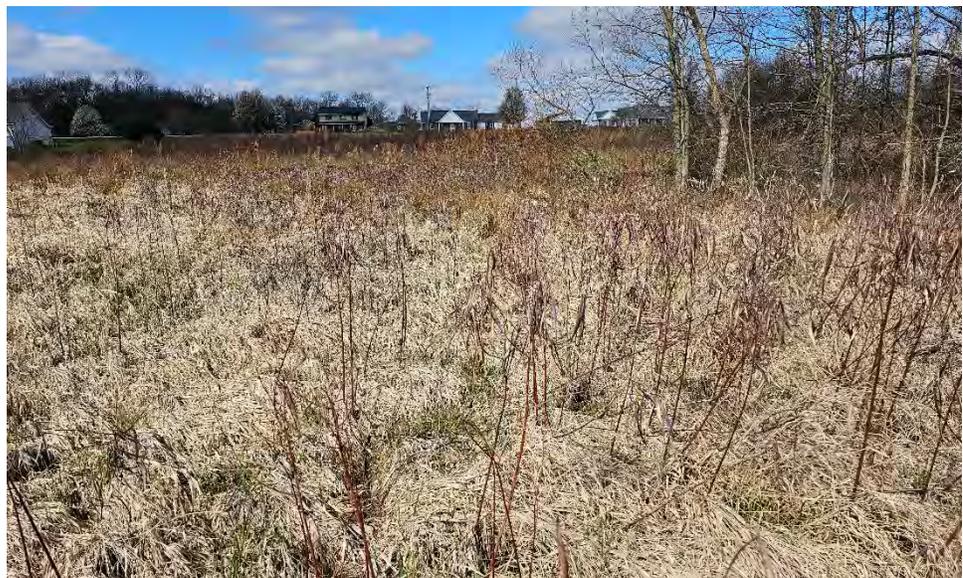


Photo: 25

WL-60-PEM
DP WL-60

Direction of View:

East

Date:

27 March 2024



Photo: 26

WL-60-PEM
DP WL-60

Direction of View:

South

Date:

27 March 2024



Photo: 27

WL-60-PEM
DP WL-60

Direction of View:

West

Date:

27 March 2024

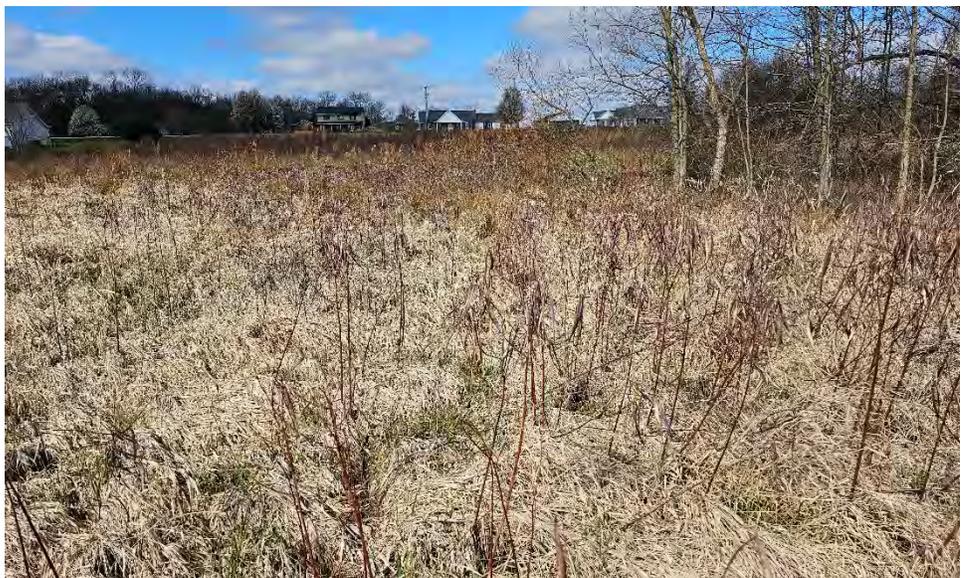


Photo: 28

DP UPL-60

Direction of View:

North

Date:

27 March 2024



Photo: 29

DP UPL-60

Direction of View:

Southwest

Date:

27 March 2024



Photo: 30

WL-60-PEM

DP WL-60-A

Direction of View:

North

Date:

27 March 2024



Photo: 31

WL-60-PEM
DP WL-60-A

Direction of View:

East

Date:

27 March 2024



Photo: 32

WL-60-PEM
DP WL-60-A

Direction of View:

South

Date:

27 March 2024



Photo: 33

WL-60-PEM
DP WL-60-A

Direction of View:

West

Date:

27 March 2024



Photo: 34

DP UPL-60-A

Direction of View:

Southwest

Date:

27 March 2024



Photo: 35

WL-50-PEM

Direction of View:

North

Date:

27 March 2024



Photo: 36

WL-50-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 37

WL-50-PEM

Direction of View:

South

Date:

27 March 2024



Photo: 38

WL-50-PEM

Direction of View:

West

Date:

27 March 2024



Photo: 39

DP UPL-50

Direction of View:

East

Date:

27 March 2024



Photo: 40

DP UPL-50

Direction of View:

West

Date:

27 March 2024



Photo: 41

WL-41-PEM

Direction of View:

North

Date:

27 March 2024



Photo: 42

WL-41-PEM

Direction of View:

East

Date:

27 March 2024



Photo: 43

WL-41-PEM

Direction of View:

South

Date:

27 March 2024



Photo: 44

WL-41-PEM

Direction of View:

West

Date:

27 March 2024



Photo: 45

DP UPL-41

Direction of View:

North

Date:

27 March 2024



Photo: 46

DP UPL-41

Direction of View:

Southwest

Date:

27 March 2024



Photo: 47

WL-18-PEM

Direction of View:

North

Date:

28 March 2024



Photo: 48

WL-18-PEM

Direction of View:

East

Date:

28 March 2024



Photo: 49

WL-18-PEM

Direction of View:

South

Date:

28 March 2024



Photo: 50

WL-18-PEM

Direction of View:

West

Date:

28 March 2024



Photo: 51

DP UPL-18

Direction of View:

East

Date:

28 March 2024



Photo: 52

DP UPL-18

Direction of View:

West

Date:

28 March 2024



Photo: 53

DP 33A

Direction of View:

North

Date:

27 March 2024



Photo: 54

DP 33A

Direction of View:

South

Date:

27 March 2024

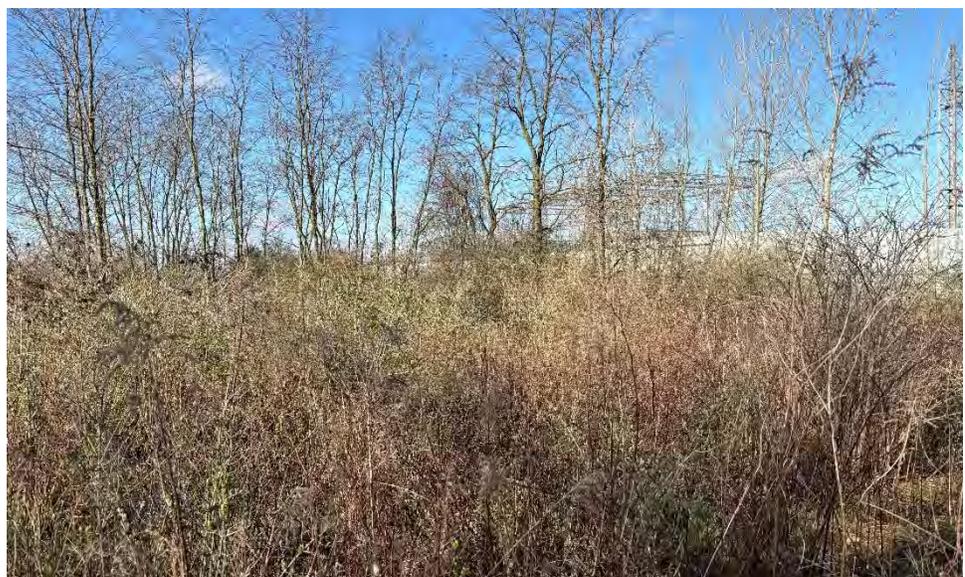


Photo: 55

DP 33

Direction of View:

North

Date:

27 March 2024



Photo: 56

DP 33

Direction of View:

South

Date:

27 March 2024



Photo: 57

DP 31

Direction of View:

North

Date:

27 March 2024



Photo: 58

DP 31

Direction of View:

South

Date:

27 March 2024



Photo: 59

DP 28

Direction of View:

North

Date:

27 March 2024



Photo: 60

DP 28

Direction of View:

South

Date:

27 March 2024



Photo: 61

DP 25

Direction of View:

North

Date:

27 March 2024



Photo: 62

DP 25

Direction of View:

South

Date:

27 March 2024



Photo: 63

DP 22

Direction of View:

North

Date:

27 March 2024

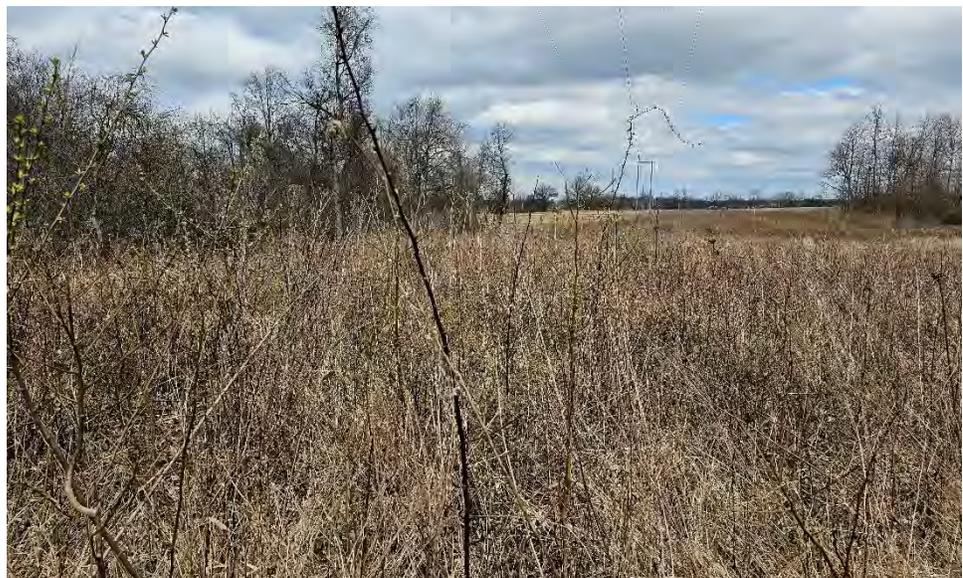


Photo: 64

DP 22

Direction of View:

South

Date:

27 March 2024



Photo: 65

DP 19

Direction of View:

North

Date:

27 March 2024



Photo: 66

DP 19

Direction of View:

South

Date:

27 March 2024



Photo: 67

DP 16

Direction of View:

North

Date:

27 March 2024



Photo: 68

DP 16

Direction of View:

South

Date:

27 March 2024



Photo: 69

DP 14

Direction of View:

North

Date:

27 March 2024



Photo: 70

DP 14

Direction of View:

South

Date:

27 March 2024



Photo: 71

DP 12

Direction of View:

North

Date:

27 March 2024



Photo: 72

DP 12

Direction of View:

South

Date:

27 March 2024

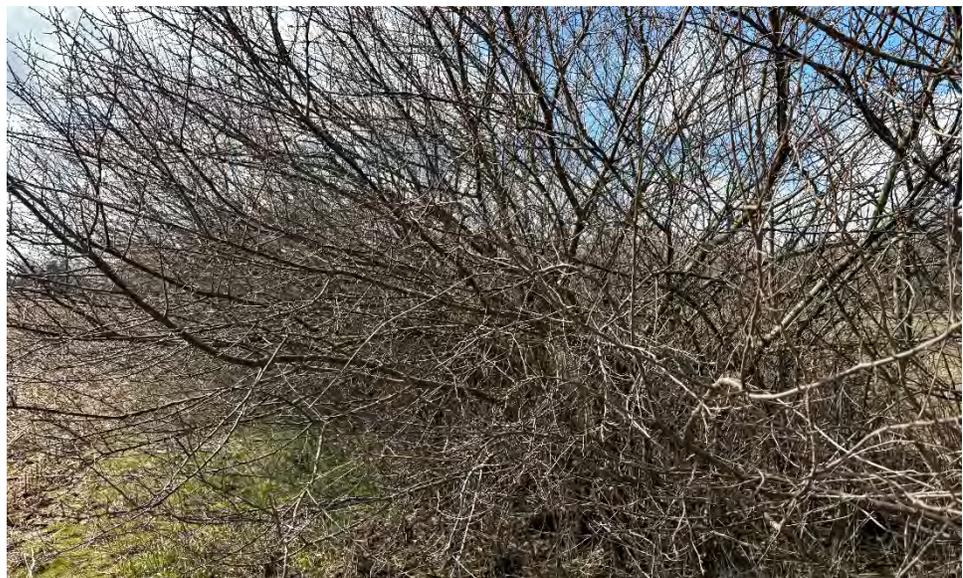


Photo: 73

DP 10

Direction of View:

North

Date:

27 March 2024



Photo: 74

DP 10

Direction of View:

South

Date:

27 March 2024



Photo: 75

DP 8

Direction of View:

North

Date:

27 March 2024



Photo: 76

DP 8

Direction of View:

South

Date:

27 March 2024



Photo: 77

DP 6

Direction of View:

Northeast

Date:

27 March 2024



Photo: 78

DP 6

Direction of View:

Southwest

Date:

27 March 2024



Photo: 79

DP 4

Direction of View:

Northeast

Date:

27 March 2024



Photo: 80

DP 4

Direction of View:

Southwest

Date:

27 March 2024



Photo: 81

DP 4A

Direction of View:

Northeast

Date:

27 March 2024



Photo: 82

DP 4A

Direction of View:

Southwest

Date:

27 March 2024



Photo: 83

DP 3

Direction of View:

Northeast

Date:

27 March 2024



Photo: 84

DP 3

Direction of View:

Southwest

Date:

27 March 2024



Photo: 85

DP 2

Direction of View:

Northeast

Date:

27 March 2024



Photo: 86

DP 2

Direction of View:

Southwest

Date:

27 March 2024



Photo: 87

DP 71

Direction of View:

North

Date:

27 March 2024



Photo: 88

DP 71

Direction of View:

South

Date:

27 March 2024



Photo: 89

DP 70

Direction of View:

North

Date:

27 March 2024



Photo: 90

DP 70

Direction of View:

South

Date:

27 March 2024



Photo: 91

DP 68

Direction of View:

North

Date:

27 March 2024



Photo: 92

DP 68

Direction of View:

South

Date:

27 March 2024



Photo: 93

DP 63

Direction of View:

North

Date:

27 March 2024



Photo: 94

DP 63

Direction of View:

South

Date:

27 March 2024



Photo: 95

DP 62A

Direction of View:

North

Date:

27 March 2024



Photo: 96

DP 62A

Direction of View:

South

Date:

27 March 2024



Photo: 97

DP 62

Direction of View:

North

Date:

27 March 2024



Photo: 98

DP 62

Direction of View:

South

Date:

27 March 2024



Photo: 99

DP 59

Direction of View:

Northeast

Date:

27 March 2024



Photo: 100

DP 59

Direction of View:

Southwest

Date:

27 March 2024

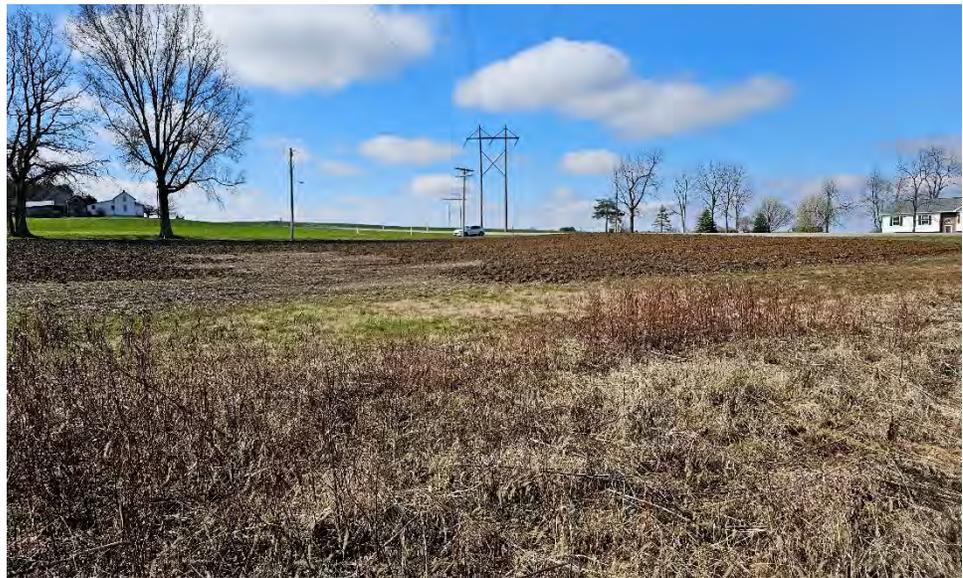


Photo: 101

DP 57

Direction of View:

North

Date:

27 March 2024



Photo: 102

DP 57

Direction of View:

Southwest

Date:

27 March 2024



Photo: 103

DP 52

Direction of View:

East

Date:

27 March 2024



Photo: 104

DP 52

Direction of View:

West

Date:

27 March 2024



Photo: 105

DP 51

Direction of View:

Northwest

Date:

27 March 2024



Photo: 106

DP 51

Direction of View:

Southeast

Date:

27 March 2024



Photo: 107

DP 48

Direction of View:

North

Date:

27 March 2024



Photo: 108

DP 48

Direction of View:

South

Date:

27 March 2024



Photo: 109

DP 46

Direction of View:

North

Date:

27 March 2024



Photo: 110

DP 46

Direction of View:

South

Date:

27 March 2024



Photo: 111

DP 44

Direction of View:

North

Date:

27 March 2024



Photo: 112

DP 44

Direction of View:

South

Date:

27 March 2024



Photo: 113

DP 42

Direction of View:

North

Date:

27 March 2024



Photo: 114

DP 42

Direction of View:

South

Date:

27 March 2024



Photo: 115

DP 41

Direction of View:

North

Date:

27 March 2024



Photo: 116

DP 41

Direction of View:

South

Date:

27 March 2024



Photo: 117

DP 40

Direction of View:

North

Date:

27 March 2024



Photo: 118

DP 40

Direction of View:

South

Date:

27 March 2024

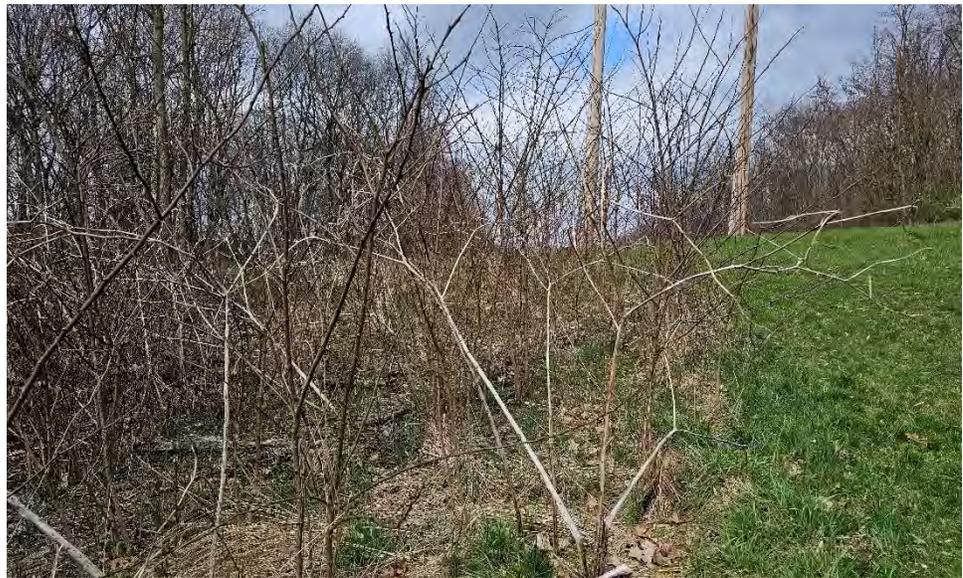


Photo: 119

DP 39

Direction of View:

North

Date:

27 March 2024



Photo: 120

DP 39

Direction of View:

South

Date:

27 March 2024



Photo: 121

DP 36

Direction of View:

North

Date:

28 March 2024



Photo: 122

DP 36

Direction of View:

South

Date:

28 March 2024



Photo: 123

DP 34

Direction of View:

North

Date:

28 March 2024

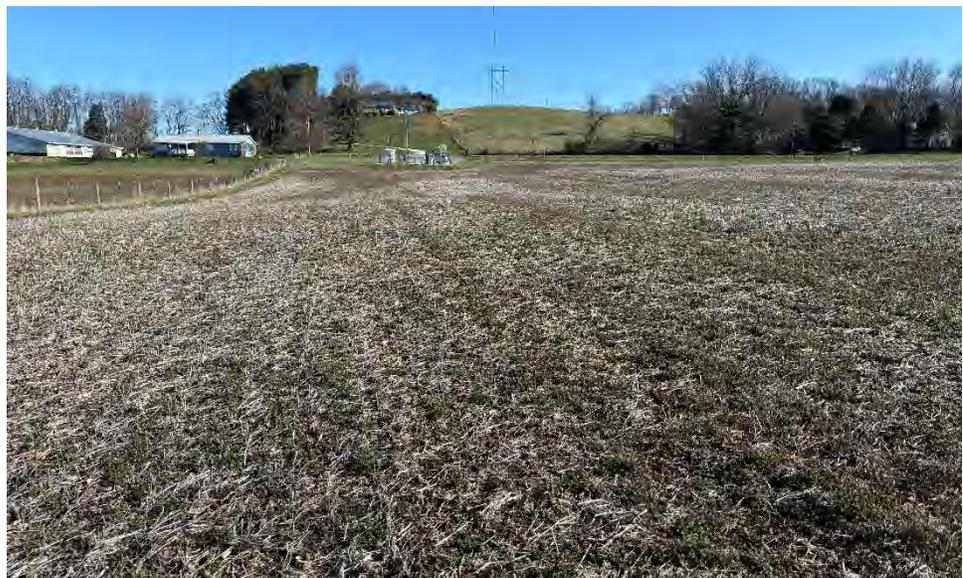


Photo: 124

DP 34

Direction of View:

South

Date:

28 March 2024



Photo: 125

DP 32

Direction of View:

Northeast

Date:

28 March 2024



Photo: 126

DP 32

Direction of View:

West

Date:

28 March 2024

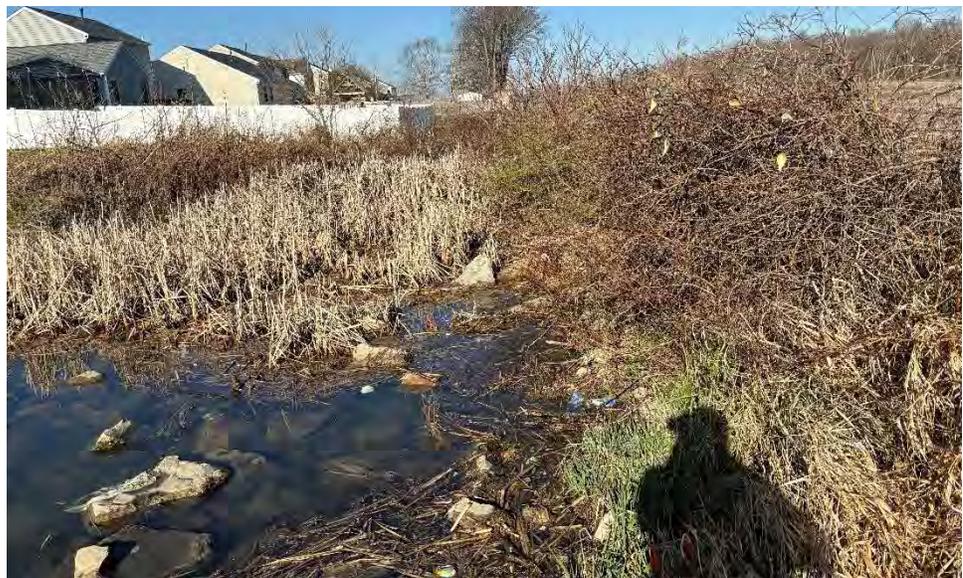


Photo: 127

DP 31A

Direction of View:

North

Date:

28 March 2024



Photo: 128

DP 31A

Direction of View:

South

Date:

28 March 2024



Photo: 129

DP 26

Direction of View:

North

Date:

28 March 2024



Photo: 130

DP 26

Direction of View:

South

Date:

28 March 2024



Photo: 131

DP 23

Direction of View:

North

Date:

28 March 2024



Photo: 132

DP 23

Direction of View:

South

Date:

28 March 2024



Photo: 133

DP 22

Direction of View:

North

Date:

28 March 2024



Photo: 134

DP 22

Direction of View:

South

Date:

28 March 2024



Photo: 135

DP 20

Direction of View:

Northwest

Date:

28 March 2024



Photo: 136

DP 20

Direction of View:

Southeast

Date:

28 March 2024



Photo: 137

DP 15

Direction of View:

Northeast

Date:

28 March 2024



Photo: 138

DP 15

Direction of View:

South

Date:

28 March 2024



Photo: 139

DP 13

Direction of View:

Northeast

Date:

28 March 2024



Photo: 140

DP 13

Direction of View:

Southwest

Date:

28 March 2024



Photo: 141

DP 11

Direction of View:

North

Date:

28 March 2024



Photo: 142

DP 11

Direction of View:

South

Date:

28 March 2024



Photo: 143

DP 8A

Direction of View:

North

Date:

28 March 2024

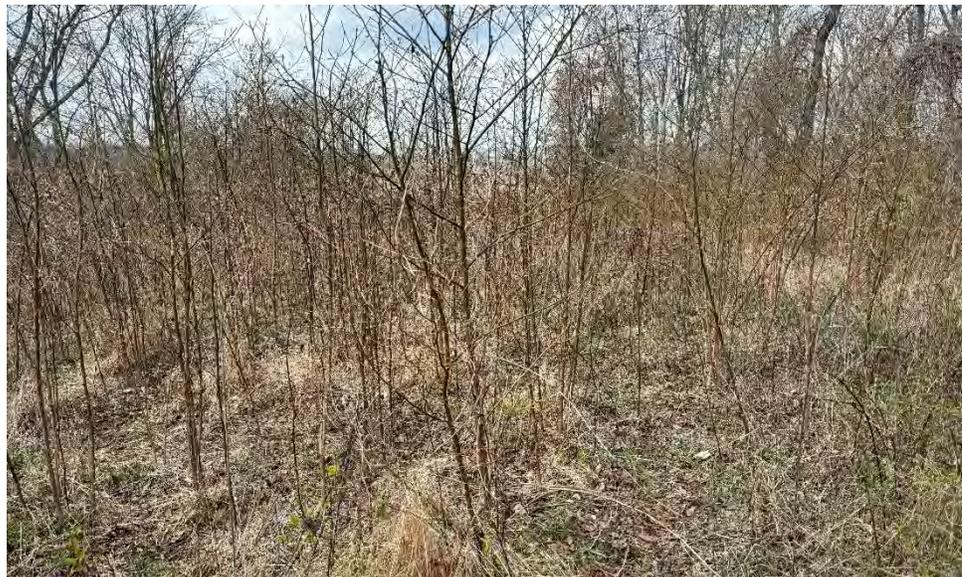


Photo: 144

DP 8A

Direction of View:

South

Date:

28 March 2024



Photo: 145

DP 7

Direction of View:

North

Date:

28 March 2024



Photo: 146

DP 7

Direction of View:

South

Date:

28 March 2024



Photo: 147

DP 5A

Direction of View:

North

Date:

28 March 2024



Photo: 148

DP 5A

Direction of View:

South

Date:

28 March 2024



Photo: 149

DP 3A

Direction of View:

North

Date:

28 March 2024



Photo: 150

DP 3A

Direction of View:

South

Date:

28 March 2024



Photo: 151

DP 1A

Direction of View:

East

Date:

28 March 2024



Photo: 152

DP 1A

Direction of View:

West

Date:

28 March 2024



Photo: 153

DP 1

Direction of View:

East

Date:

28 March 2024



Photo: 154

DP 1

Direction of View:

West

Date:

28 March 2024



Photo: 155

ST-31-PER

Direction of View:

North

Date:

27 March 2024



Photo: 156

ST-31-PER

Direction of View:

South

Date:

27 March 2024

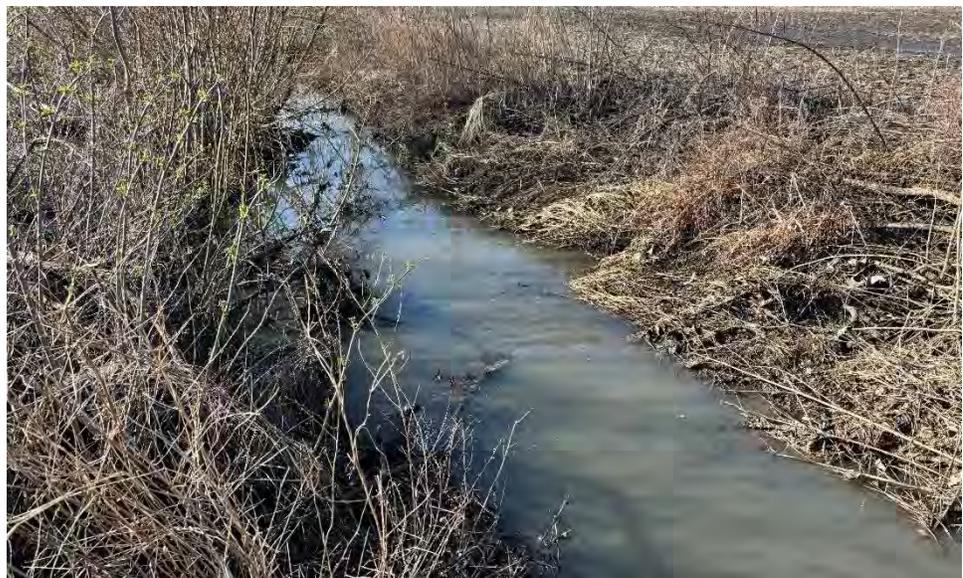


Photo: 157

ST-25-PER

Direction of View:

East

Date:

27 March 2024



Photo: 158

ST-25-PER

Direction of View:

West

Date:

27 March 2024



Photo: 159

ST-15-PER

Direction of View:

East

Date:

27 March 2024



Photo: 160

ST-15-PER

Direction of View:

Southwest

Date:

27 March 2024



Photo: 161

Walnut Creek

Direction of View:

East

Date:

27 March 2024

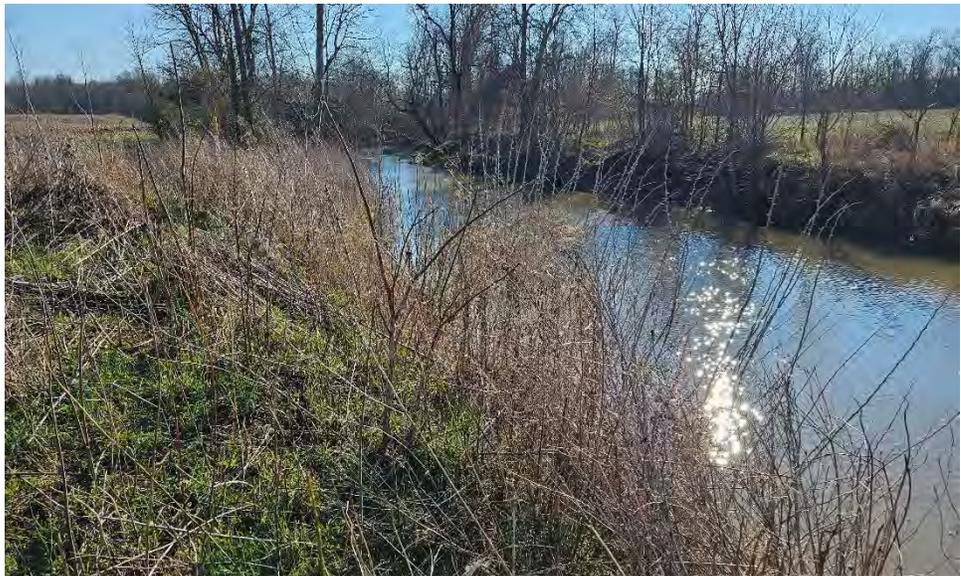


Photo: 162

Walnut Creek

Direction of View:

West

Date:

27 March 2024



Photo: 163

ST-2-PER

Direction of View:

East

Date:

27 March 2024



Photo: 164

ST-2-PER

Direction of View:

West

Date:

27 March 2024



Photo: 165

ST-68-INT

Direction of View:

East

Date:

27 March 2024



Photo: 166

ST-68-INT

Direction of View:

West

Date:

27 March 2024



Photo: 167

ST-63-EPH

Direction of View:

Northeast

Date:

27 March 2024



Photo: 168

ST-63-EPH

Direction of View:

Southwest

Date:

27 March 2024

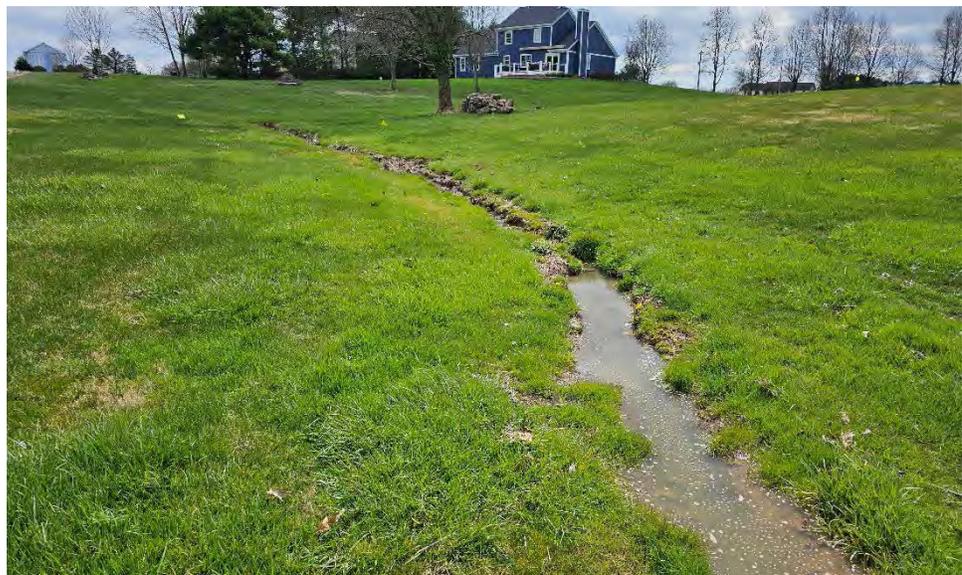


Photo: 169

ST-55-INT

Direction of View:

East

Date:

27 March 2024



Photo: 170

ST-55-INT

Direction of View:

West

Date:

27 March 2024



Photo: 171

ST-53-INT

Direction of View:

North

Date:

27 March 2024



Photo: 172

ST-53-INT

Direction of View:

South

Date:

27 March 2024

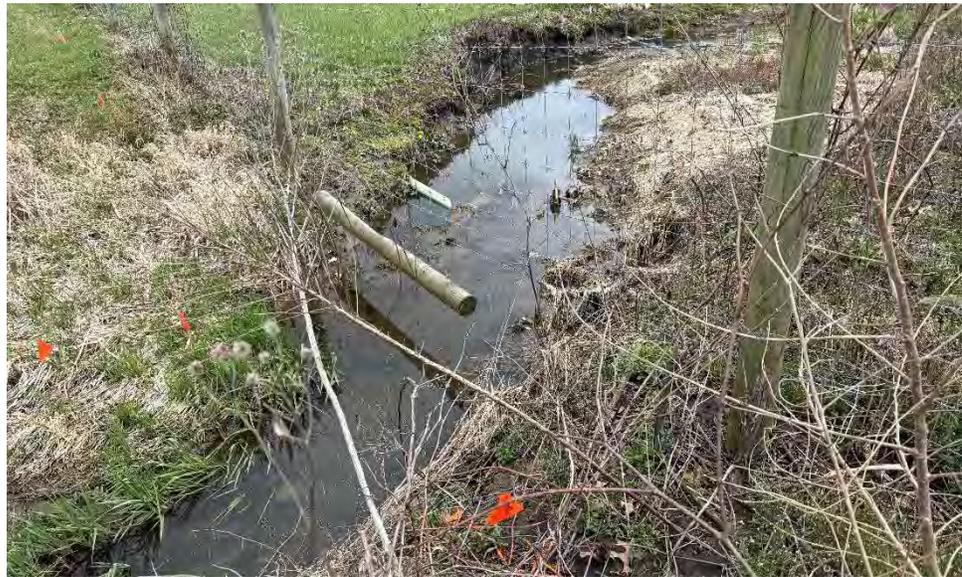


Photo: 173

ST-48-EPH

Direction of View:

Northwest

Date:

27 March 2024



Photo: 174

ST-48-EPH

Direction of View:

Southeast

Date:

27 March 2024



Photo: 175

ST-44-INT

Direction of View:

East

Date:

27 March 2024



Photo: 176

ST-44-INT

Direction of View:

West

Date:

27 March 2024



Photo: 177

ST-44-EPH

Direction of View:

North

Date:

27 March 2024



Photo: 178

ST-44-EPH

Direction of View:

South

Date:

27 March 2024



Photo: 179

ST-42-INT

Direction of View:

East

Date:

27 March 2024



Photo: 180

ST-42-INT

Direction of View:

West

Date:

27 March 2024



Photo: 181

ST-14-PER

Direction of View:

East

Date:

28 March 2024



Photo: 182

ST-14-PER

Direction of View:

Southwest

Date:

28 March 2024



Photo: 183

Hocking River

Direction of View:

Northwest

Date:

28 March 2024

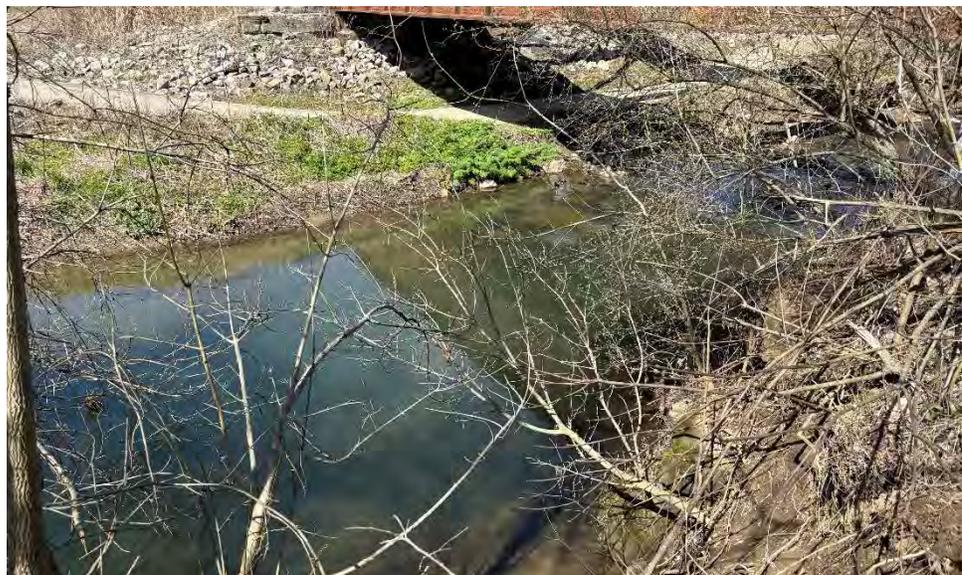


Photo: 184

Hocking River

Direction of View:

Southeast

Date:

28 March 2024

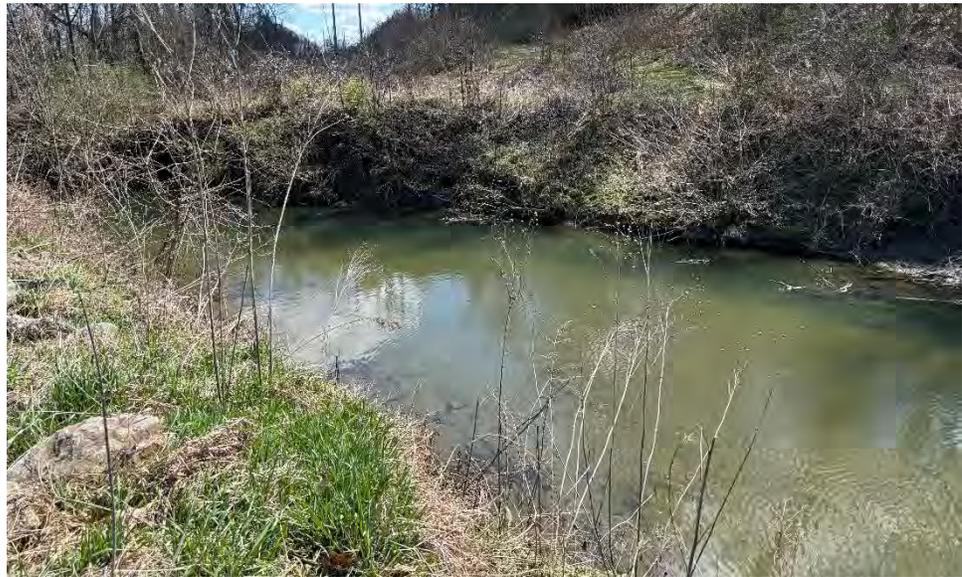


Photo: 185

ST-11-INT

Direction of View:

Northwest

Date:

28 March 2024



Photo: 186

ST-11-INT

Direction of View:

Southeast

Date:

28 March 2024



Photo: 187

Hunters Run

Direction of View:

Northwest

Date:

28 March 2024



Photo: 188

Hunters Run

Direction of View:

East

Date:

28 March 2024



Photo: 189

OW-32-POND

Direction of View:

East

Date:

28 March 2024



Photo: 190
OW-32-POND

Direction of View:
South

Date:
28 March 2024

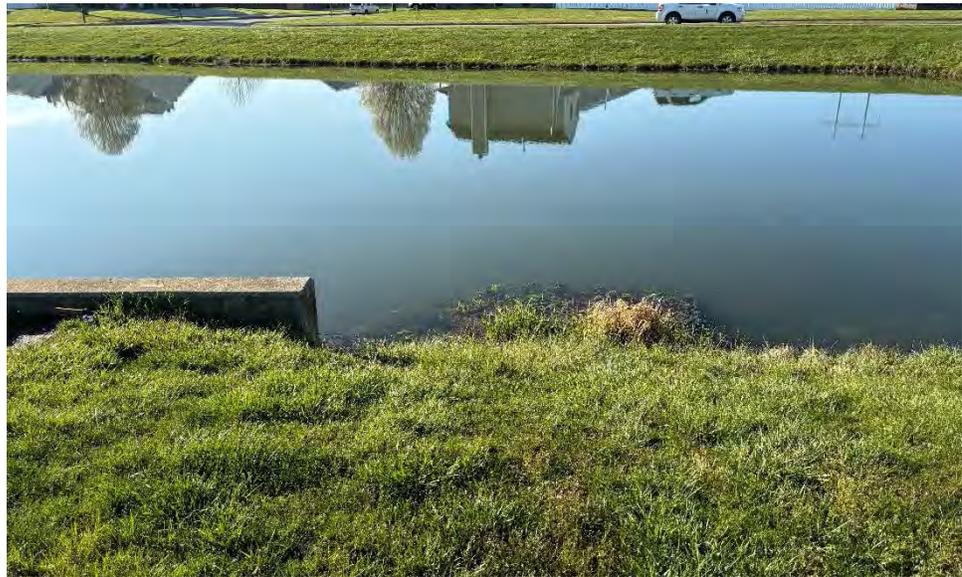


Photo: 191
OW-22-POND

Direction of View:
Northwest

Date:
28 March 2024

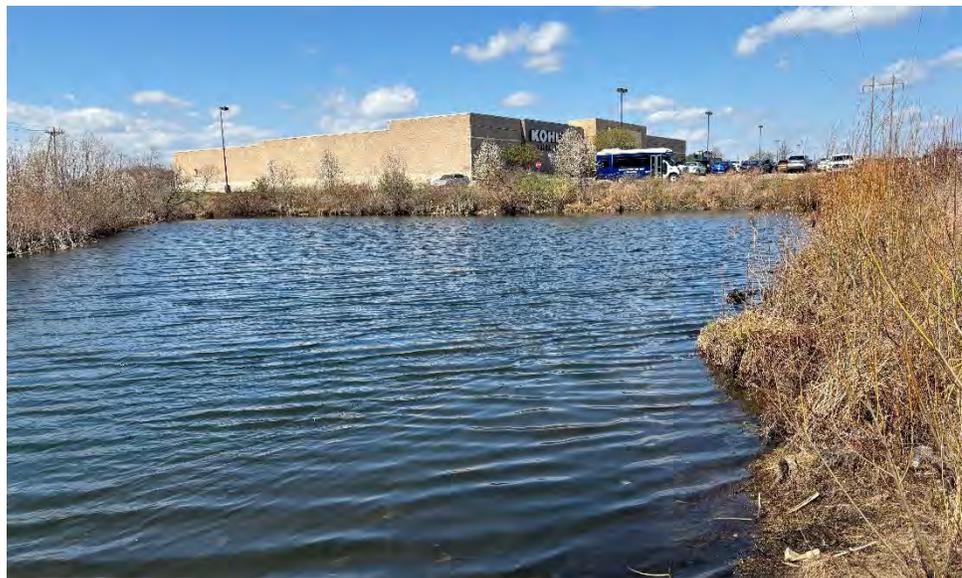


Photo: 192
OW-22-POND

Direction of View:
South

Date:
28 March 2024



Appendix C

Data Forms



WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-12
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Concave
 Slope (%): 1-3 Lat. 39.847477 Long. -82.586566 Datum NAD83 NWI Class: PEM
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u>x</u> No <u> </u>
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>80</u> x <u>1</u> = <u>80</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>120</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Leersia oryzoides</u>		80	Y	OBL 1	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u>Elymus virginicus</u>		20	Y	FACW 2	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		100	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u> </u>		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/1	95	10YR 5/6	5	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present? Yes x No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface	
<input type="checkbox"/> Water Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other	

Field Observations: Surface Water Present? Yes x No Depth (inches) 1
 Water Table Present? Yes x No Depth (inches) 0
 Saturation Present? Yes x No Depth (inches) 0

Hydrology Indicators Present? Yes x No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-12
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.847526 Long. -82.586522 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland?
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u>Rosa multiflora</u>		8	Y	FACU 4	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>25</u> x <u>3</u> = <u>75</u> FACU species <u>85</u> x <u>4</u> = <u>340</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>110</u> Prevalence Index: <u>3.77</u>
2. <u>Rubus allegheniensis</u>		2	Y	FACU 4	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		10	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Solidago canadensis</u>		75	Y	FACU 4	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
2. <u>Apocynum cannabinum</u>		20	Y	FAC 3	
3. <u>Vernonia gigantea</u>		5	N	FAC 3	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		100	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
2. <u> </u>		0	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix			Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-13	10YR 4/1	100					Si C L		
13-18	10YR 4/1	95	10YR 5/6	5	C	M	Si C L		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> x <u> </u>
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)		
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)		
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)		
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)		
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)		
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)		
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)		
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)		
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)			
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other			
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>		
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-10
 Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terrances Local Relief Concave
 Slope (%): 1-3 Lat. 39.841685 Long. -82.589005 Datum NAD83 NWI Class: PEM
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u>x</u> No <u> </u>
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>25</u> x <u>2</u> = <u>50</u> FAC species <u>15</u> x <u>3</u> = <u>45</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>40</u> Prevalence Index: <u>2.38</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Elymus virginicus</u>		25	Y	FACW	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u>Barbarea vulgaris</u>		15	Y	FAC	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		40	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u> </u>		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix			Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 3/1	95	10YR 5/6	5	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>x</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	
Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>x</u> No <u> </u>

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<u>x</u>	Surface Water (A1)	<u> </u>	Water Stained Leaves (B9)
<u>x</u>	High Water Table (A2)	<u> </u>	Aquatic Fauna (B13)
<u>x</u>	Saturation (A3)	<u> </u>	True Aquatic Plants (B14)
<u> </u>	Water Marks (B1)	<u> </u>	Hydrogen Sulfide Odor (C1)
<u> </u>	Sediment Deposits (B2)	<u> </u>	Oxidized Rhizospheres on Living Roots
<u> </u>	Drift Deposits (B3)	<u> </u>	Presence of Reduced Iron (C4)
<u> </u>	Algal Mat or Crust (B4)	<u> </u>	Recent Iron Reduction in Tilled Soil (C6)
<u> </u>	Iron Deposits (B5)	<u> </u>	Thin Muck Surface (C7)
<u> </u>	Inundation Visible on Aerial Imagery (B7)	<u> </u>	Guage or Well Data (D9)
<u> </u>	Sparsely Vegetated Concave Surface	<u> </u>	Other
Field Observations: Surface Water Present? Yes <u>x</u> No <u> </u>		Depth (inches) <u>1</u>	
Water Table Present? Yes <u>x</u> No <u> </u>		Depth (inches) <u>0</u>	
Saturation Present? Yes <u>x</u> No <u> </u>		Depth (inches) <u>0</u>	
		Hydrology Indicators Present? Yes <u>x</u> No <u> </u>	

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-10
 Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terrances Local Relief Convex
 Slope (%): Lat. 39.841658 Long. -82.589099 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x <u> </u>
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>80</u> x <u>5</u> = <u>400</u> Total <u>80</u> Prevalence Index: <u>5.00</u>
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
Herb Stratum Plot size: <u>5'</u>					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Triticum aestivum residue</u>		80	Y	UPL 5	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
8. <u> </u>		80	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-4	10YR 3/1	100						Si C L	
4-18	10YR 3/1	95	10YR 5/6	5	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>x</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>x</u> No <u> </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u> Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u> Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>		Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-5
 Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Lake Plains Local Relief Concave
 Slope (%): Lat. 39.834307° Long. -82.591561° Datum NAD83 NWI Class: PEM
 Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>4</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>1.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>80</u> x <u>1</u> = <u>80</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>20</u> x <u>3</u> = <u>60</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>1.40</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
			Total Cover		
Herb Stratum	Plot size:				
1. <u>Scirpus atrovirens</u>	<u>5'</u>	<u>60</u>	<u>Y</u>	<u>OBL 1</u>	
2. <u>Apocynum cannabinum</u>		<u>20</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u>Alisma subcordatum</u>		<u>10</u>	<u>N</u>	<u>OBL 1</u>	
4. <u>Juncus effusus</u>		<u>10</u>	<u>N</u>	<u>OBL 1</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-6	10YR 4/2	100						SiL	
6-18	10YR 4/2	95	10YR 7/6	5	C		M	SiL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>X</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present?	Yes <u>X</u> No <u> </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)			
<u>X</u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)			
<u>X</u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)			
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)			
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)			
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)			
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u>X</u> Geomorphic Position (D2)			
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>X</u> FAC-Neutral Test (D5)			
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)				
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other				

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes X No Depth (inches)
 Saturation Present? Yes X No Depth (inches)

Hydrology Indicators Present?	Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-5
 Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Lake Plains Local Relief Convex
 Slope (%): Lat. 39.834361° Long. -82.591594° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>40.00</u>
2.					
3.					
4.					
5.		0	Total Cover		
Shrub Stratum Plot size: 15'					
1.	<i>Rubus allegheniensis</i>	5	Y	FACU 4	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>5</u> x <u>3</u> = <u>15</u> FACU species <u>85</u> x <u>4</u> = <u>340</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>110</u> Prevalence Index: <u>3.59</u>
2.	<i>Acer rubrum</i>	5	Y	FAC 3	
3.					
4.					
5.		10	Total Cover		
Herb Stratum Plot size: 5'					
1.	<i>Solidago canadensis</i>	50	Y	FACU 4	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% X Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2.	<i>Schedonorus arundinaceus</i>	30	Y	FACU 4	
3.	<i>Dichanthelium clandestinum</i>	20	Y	FACW 2	
4.					
5.					
6.					
7.					
8.		100	Total Cover		
Woody Vine Stratum Plot size: 30'					
1.					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2.					
		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix	Color	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-12	10YR 3/2		100						SiCL	
12-18	10YR 4/2		95	10YR 6/6	5	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Stratified Layers (A5)	Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed): Type: _____	
Depth (Inches): _____	Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u>

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
X <input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u>	Depth (inches) _____	Hydrology Indicators Present? Yes <u>X</u> No <u> </u>	
Water Table Present? Yes <u> </u> No <u>X</u>	Depth (inches) _____		
Saturation Present? Yes <u>X</u> No <u> </u>	10 Depth (inches) _____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-68
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Concave
 Slope (%): 1-3 Lat. 39.822005° Long. -82.597640° Datum: NAD83 NWI Class: PEM
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>30</u> x <u>2</u> = <u>60</u> FAC species <u>1</u> x <u>3</u> = <u>3</u> FACU species <u>14</u> x <u>4</u> = <u>56</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>46</u> = <u>120</u> Prevalence Index: <u>2.61</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Juncus effusus</u>		40	Y	OBL 1	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u>Dichanthelium clandestinum</u>		30	Y	FACW 2	
3. <u>Solidago canadensis</u>		10	N	FACU 4	
4. <u>Elymus canadensis</u>		4	N	FACU 4	
5. <u>Carex molesta</u>		1	N	FAC 3	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		85	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>		0	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix			Redox Features					
	Color	%	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	90		10YR 5/4	10	C		M	SiCL

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
Histosol (A1)	Sandy Mucky Mineral (S1)	X Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
Stratified Layers (A5)	Stripped Matrix (S6)	Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)	Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>X</u> No <u> </u>
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
X	Surface Water (A1)		Water Stained Leaves (B9)	Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)	Drainage Patterns (B10)
	Saturation (A3)		True Aquatic Plants (B14)	Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots	Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soil (C6)	X Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X FAC-Neutral Test (D5)
	Inundation Visible on Aerial Imagery (B7)		Guage or Well Data (D9)	
	Sparsely Vegetated Concave Surface		Other	
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u>			Hydrology Indicators Present? Yes <u>X</u> No <u> </u>	
Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches) <u>5</u>				
Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u>				

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-68
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Convex
 Slope (%): Lat. 39.822032° Long. -82.597449° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Rubus allegheniensis</u>		<u>10</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>50</u> x <u>3</u> = <u>150</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>91</u> Prevalence Index: <u>3.42</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
		<u>10</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Juncus tenuis</u>		<u>50</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>
2. <u>Solidago canadensis</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Symphotrichum ericoides</u>		<u>10</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>80</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 4/2	90	10YR 5/4	10	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>X</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u> </u> X <u> </u> No <u> </u>
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>		Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u>	
Water Table Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>			
Saturation Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>			

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-60
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform: Till Plains Local Relief: Concave
 Slope (%): Lat. 39.809106° Long. -82.610454° Datum: NAD83 NWI Class: PEM
 Soil Map Unit Name: Marengo clay loam

Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic

Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>5</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>83.33</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>45</u> x <u>2</u> = <u>90</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>56</u> = <u>141</u> Prevalence Index: <u>2.52</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Juncus effusus</u>		<u>45</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u>Phalaris arundinacea</u>		<u>25</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Thyrsanthera difformis</u>		<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>Dipsacus laciniatus</u>		<u>10</u>	<u>N</u>	<u>UPL</u>	
5. <u>Lepidium latifolium</u>		<u>3</u>	<u>N</u>	<u>FACW</u>	
6. <u>Carex vulpinoidea</u>		<u>2</u>	<u>N</u>	<u>FACW</u>	
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-6	10YR 4/2	100						SiCL	
6-18	10YR 4/2	95	10YR 4/6	10	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils
<u> </u> Histosol (A1)	<u>X</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Coast Prairie Redox (A16)
<u> </u> Stratified Layers (A5)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> 2 cm Muck (A10)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Other
<u> </u> Thick Dark Surface (A12)	

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>X</u> No <u> </u>
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:	Hydrology Indicators Present?
Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u>X</u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u>X</u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u>X</u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u>X</u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u>X</u> No <u> </u>
Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches) <u>9</u>	
Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches) <u>6</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-60
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Convex
 Slope (%): Lat. 39.809228° Long. -82.610301° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Marengo clay loam

Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic

Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>4</u> Total number of dominant species across all strata: <u>7</u> Percent of dominant species that are OBL, FACW, or FAC: <u>57.14</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>70</u> x <u>4</u> = <u>280</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>81</u> Prevalence Index: <u>3.84</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Schedonorus arundinaceus</u>		55	Y	FACU 4	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u>Juncus effusus</u>		10	N	OBL 1	
3. <u>Juncus tenuis</u>		10	N	FAC 3	
4. <u>Carex frankii</u>		5	N	OBL 1	
5. <u>Trifolium pratense</u>		5	N	FACU 4	
6. <u>Dipsacus fullonum</u>		5	N	FACU 4	
7. <u>Solidago canadensis</u>		5	N	FACU 4	
8. <u> </u>		95	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-6		10YR 4/2	100					SiCL	
6-18		10YR 4/2	95	10YR 4/6	10	C	M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)
	<u> </u> Redox Dark Surface (F6)
	<u> </u> Depleted Dark Surface (F7)
	<u> </u> Redox Depressions (F8)
	<u> </u> Coast Prairie Redox (A16)
	<u> </u> Iron-Manganese Masses (F12)
	<u> </u> Very Shallow Dark Surface (F12)
	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>X</u> No <u> </u>
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)
<u>X</u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches)	Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u>
Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches)	
Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches)	

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-60A
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform: Moraines Local Relief: Concave
 Slope (%): _____ Lat. 39.807529° Long. -82.611944° Datum: NAD83 NWI Class: PEM
 Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the DP within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>8</u> Total number of dominant species across all strata: <u>8</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. _____					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>25</u> x <u>2</u> = <u>50</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>26</u> Prevalence Index: <u>1.96</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <u>Juncus effusus</u>		20	Y	OBL 1	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Scirpus cyperinus</u>		20	Y	OBL 1	
3. <u>Phalaris arundinacea</u>		15	N	FACW 2	
4. <u>Carex frankii</u>		10	N	OBL 1	
5. <u>Carex vulpinoidea</u>		10	N	FACW 2	
6. <u>Alisma subcordatum</u>		5	N	OBL 1	
7. <u>Typha latifolia</u>		5	N	OBL 1	
8. <u>Carex muskingumensis</u>		5	N	OBL 1	
		90	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____					
		0	Total Cover		
Remarks: _____					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-4	10YR 4/2	100					SiL	
4-18	10YR 4/2	90	10YR 4/6	10	C	M	SICL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
Histosol (A1)	Sandy Mucky Mineral (S1)	X Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
Stratified Layers (A5)	Stripped Matrix (S6)	Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)	Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
	Surface Water (A1)		Water Stained Leaves (B9)	Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)	Drainage Patterns (B10)
X	Saturation (A3)		True Aquatic Plants (B14)	Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	X Crayfish Burrows (C8)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots	Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soil (C6)	X Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X FAC-Neutral Test (D5)
	Inundation Visible on Aerial Imagery (B7)		Guage or Well Data (D9)	
	Sparsely Vegetated Concave Surface		Other	
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>			Hydrology Indicators Present? Yes <input checked="" type="checkbox"/> No _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____				
Saturation Present? Yes <input checked="" type="checkbox"/> No _____				

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-60A
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform: Moraines Local Relief: Convex
 Slope (%): _____ Lat. 39.807445° Long. -82.611981° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the DP within a Wetland? Yes _____ No _____ X _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>5</u> x <u>3</u> = <u>15</u> FACU species <u>95</u> x <u>4</u> = <u>380</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>101</u> Prevalence Index: <u>3.92</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Solidago canadensis</u>		70	Y	FACU	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ X _____
2. <u>Rubus allegheniensis</u>		15	N	FACU	
3. <u>Rosa multiflora</u>		10	N	FACU	
4. <u>Poa pratensis</u>		5	N	FAC	
5. _____					
6. _____					
7. _____					
8. _____		100	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Hydrophytic Vegetation Present? Yes _____ No _____ X _____
2. _____		0	Total Cover		
Remarks: _____					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix	Color	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-4		10YR 3/2	100						SICL	
4-18		10YR 3/2	95	10YR 6/6	5	C		M	SICL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Histosol (A1)	Sandy Mucky Mineral (S1)	X
Histic Epipedon (A2)	5cm Mucky Peat or Peat	_____
Black Histic (A3)	Sandy Gleyed Matrix (S4)	_____
Hydrogen Sulfide (A4)	Sandy Redox (S5)	_____
Stratified Layers (A5)	Stripped Matrix (S6)	_____
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	_____
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	_____
Thick Dark Surface (A12)	Depleted Matrix (F3)	_____

Indicators for Problematic Hydric Soils
 Coast Prairie Redox (A16) _____
 Iron-Manganese Masses (F12) _____
 Very Shallow Dark Surface (F12) _____
 Other _____

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____

	Hydric Soil Present? Yes _____ X _____ No _____
--	--

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1) _____	Water Stained Leaves (B9) _____
X High Water Table (A2) _____	Aquatic Fauna (B13) _____
X Saturation (A3) _____	True Aquatic Plants (B14) _____
Water Marks (B1) _____	Hydrogen Sulfide Odor (C1) _____
Sediment Deposits (B2) _____	Oxidized Rhizospheres on Living Roots _____
Drift Deposits (B3) _____	Presence of Reduced Iron (C4) _____
Algal Mat or Crust (B4) _____	Recent Iron Reduction in Tilled Soil (C6) _____
Iron Deposits (B5) _____	Thin Muck Surface (C7) _____
Inundation Visible on Aerial Imagery (B7) _____	Guage or Well Data (D9) _____
Sparsely Vegetated Concave Surface _____	Other _____

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Water Table Present? Yes <u>X</u> No _____ Saturation Present? Yes <u>X</u> No _____	Depth (inches) _____ Depth (inches) <u>12</u> Depth (inches) _____ Hydrology Indicators Present? Yes _____ X _____ No _____
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Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-50
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform: Moraines Local Relief: Concave
 Slope (%): 1-3 Lat. 39.793217 Long. -82.621980 Datum: NAD83 NWI Class: PEM
 Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u>x</u> No <u> </u>
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>100</u> x <u>2</u> = <u>200</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>2.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Carex vulpinoidea</u>		<u>100</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u> </u>		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 4/1	85	7.5YR 4/6	15	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u>x</u> No <u> </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u>x</u> No <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-50
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform: Moraines Local Relief: Convex
 Slope (%): 2-5 Lat. 39.793193 Long. -82.622009 Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u> 0</u> Total number of dominant species across all strata: <u> 2</u> Percent of dominant species that are OBL, FACW, or FAC: <u> 0.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u> 0</u> x <u> 1</u> = <u> 0</u> FACW species <u> 0</u> x <u> 2</u> = <u> 0</u> FAC species <u> 5</u> x <u> 3</u> = <u> 15</u> FACU species <u> 75</u> x <u> 4</u> = <u> 300</u> UPL species <u> 20</u> x <u> 5</u> = <u> 100</u> Total <u> 100</u> Prevalence Index: <u> 4.15</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Setaria faberi</u>		70	Y	FACU 4	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
2. <u>Zea mays residue</u>		20	Y	UPL 5	
3. <u>Panicum virgatum</u>		5	N	FAC 3	
4. <u>Rubus allegheniensis</u>		5	N	FACU 4	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		100	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
2. <u> </u>		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Texture	Redox Features	Remarks
0-18	10YR 4/3	100					Si C L		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u> Depth (Inches): <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> x
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x	
Water Table Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>		
Saturation Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>		

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-41
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Flood Plains Local Relief Concave
 Slope (%): Lat. 39.774841° Long. -82.628062° Datum: NAD83 NWI Class: PEM
 Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>_____</u>	Is the DP within a Wetland? Yes <u>X</u> No <u>_____</u>
Hydric Soil Present? Yes <u>X</u> No <u>_____</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>_____</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>7</u> Total number of dominant species across all strata: <u>9</u> Percent of dominant species that are OBL, FACW, or FAC: <u>77.78</u>
1. _____	30'	_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>35</u> x <u>2</u> = <u>70</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>8</u> x <u>4</u> = <u>32</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>74</u> = <u>193</u> Prevalence Index: <u>2.61</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Rubus allegheniensis</u>	15'	5	Y	FACU 4	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
5 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Verbena urticifolia</u>	5'	20	Y	FAC 3	
2. <u>Phalaris arundinacea</u>		20	Y	FACW 2	
3. <u>Physostegia virginiana</u>		15	N	FACW 2	
4. <u>Juncus effusus</u>		15	N	OBL 1	
5. <u>Carex frankii</u>		10	N	OBL 1	
6. <u>Juncus tenuis</u>		10	N	FAC 3	
7. <u>Carex muskingumensis</u>		5	N	OBL 1	
8. <u>Setaria faberi</u>		3	N	FACU 4	
98 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	30'	_____	_____	_____	
2. _____		_____	_____	_____	
0 Total Cover					
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-10	10YR 4/2	95	10YR 4/6	5	C		M	SiL	
10-13	10YR 4/2	85	10YR 4/6	15	C		M	SiL	
13-18	10YR 2/1	100						SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____	Histosol (A1)	Sandy Mucky Mineral (S1)
_____	Histic Epipedon (A2)	5cm Mucky Peat or Peat
_____	Black Histic (A3)	Sandy Gleyed Matrix (S4)
_____	Hydrogen Sulfide (A4)	Sandy Redox (S5)
_____	Stratified Layers (A5)	Stripped Matrix (S6)
_____	2 cm Muck (A10)	Loamy Mucky Mineral (F1)
_____	Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)
_____	Thick Dark Surface (A12)	Depleted Matrix (F3)

Redox Dark Surface (F6)
 Depleted Dark Surface (F7)
 Redox Depressions (F8)
Indicators for Problematic Hydric Soils
 Coast Prairie Redox (A16)
 Iron-Manganese Masses (F12)
 Very Shallow Dark Surface (F12)
 Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____	Hydric Soil Present? Yes <u>X</u> No <u>_____</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
_____	Surface Water (A1)	_____	Water Stained Leaves (B9)
<u>X</u>	High Water Table (A2)	_____	Aquatic Fauna (B13)
<u>X</u>	Saturation (A3)	_____	True Aquatic Plants (B14)
_____	Water Marks (B1)	_____	Hydrogen Sulfide Odor (C1)
_____	Sediment Deposits (B2)	_____	Oxidized Rhizospheres on Living Roots
_____	Drift Deposits (B3)	_____	Presence of Reduced Iron (C4)
_____	Algal Mat or Crust (B4)	_____	Recent Iron Reduction in Tilled Soil (C6)
_____	Iron Deposits (B5)	_____	Thin Muck Surface (C7)
_____	Inundation Visible on Aerial Imagery (B7)	_____	Guage or Well Data (D9)
_____	Sparsely Vegetated Concave Surface	_____	Other
Field Observations:	Surface Water Present? Yes <u>X</u> No <u>_____</u>	Depth (inches)	
	Water Table Present? Yes <u>X</u> No <u>_____</u>	Depth (inches)	<u>14</u>
	Saturation Present? Yes <u>X</u> No <u>_____</u>	Depth (inches)	<u>14</u>
	Hydrology Indicators Present? Yes <u>X</u> No <u>_____</u>		

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-41A
 Client: AEP State: OH Section, Township, Range: _____
 Investigator(s): L. Vine, E.Holt Landform _____ Flood Plains _____ Local Relief _____ Concave _____
 Slope (%): _____ Lat. 39.774189° Long. -82.628267° Datum NAD83 NWI Class: PEM
 Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the DP within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>8</u> Total number of dominant species across all strata: <u>8</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
1. _____	<u>30'</u>				
2. _____					
3. _____					
4. _____					
5. _____		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>40</u> x <u>2</u> = <u>80</u> FAC species <u>25</u> x <u>3</u> = <u>75</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>66</u> = <u>156</u> Prevalence Index: <u>2.36</u>
1. _____	<u>15'</u>				
2. _____					
3. _____					
4. _____					
5. _____		<u>0</u>	Total Cover		
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Carex vulpinoidea</u>	<u>5'</u>	<u>20</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
2. <u>Apocynum cannabinum</u>		<u>15</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
3. <u>Carex muskingumensis</u>		<u>10</u>	<u>N</u>	<u>OBL</u> <u>1</u>	
4. <u>Epilobium coloratum</u>		<u>10</u>	<u>N</u>	<u>OBL</u> <u>1</u>	
5. <u>Cinna arundinacea</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
6. <u>Poa pratensis</u>		<u>10</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
7. <u>Symphotrichum lateriflorum</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
8. <u>Lycopus americanus</u>		<u>5</u>	<u>N</u>	<u>OBL</u> <u>1</u>	
		<u>90</u>	Total Cover		
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	<u>30'</u>				
2. _____					
		<u>0</u>	Total Cover		
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-2	10YR 4/2	100						SiL	
2-18	10YR2/1	97	10YR 4/6	3	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	<u>X</u>	Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____	Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____	Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____	Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____	Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____	Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____	Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____

Hydric Soil Present? Yes X No _____

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)			
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)			
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)			
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)			
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)			
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)			
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	<u>x</u> Geomorphic Position (D2)			
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	<u>x</u> FAC-Neutral Test (D5)			
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)				
_____ Sparsely Vegetated Concave Surface	_____ Other				
Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches) _____	Water Table Present? Yes _____ No <u>x</u> Depth (inches) _____	Hydrology Indicators Present? Yes <u>X</u> No _____			
Saturation Present? Yes _____ No <u>x</u> Depth (inches) _____					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-41A
 Client: AEP State: OH Section, Township, Range: _____
 Investigator(s): L. Vine, E.Holt Landform _____ Flood Plains _____ Local Relief _____ Convex _____
 Slope (%): _____ Lat. 39.774139° Long. -82.628196° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the DP within a Wetland?
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Yes No X	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>65</u> x <u>4</u> = <u>260</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>86</u> Prevalence Index: <u>3.62</u>
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Setaria faberi</u>		60	Y	FACU 4	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Carex frankii</u>		15	N	OBL 1	
3. <u>Verbena urticifolia</u>		10	N	FAC 3	
4. <u>Euthamia graminifolia</u>		10	N	FACW 2	
5. <u>Solidago canadensis</u>		5	N	FACU 4	
6. _____					
7. _____					
8. _____		100	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____		0	Total Cover		
Remarks: _____					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color	%	Color	%	Type*	Loc**			
0-18	10YR 3/2	100					SiCL		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
Histosol (A1)	Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
Stratified Layers (A5)	Stripped Matrix (S6)	Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)	Other

Restrictive Layer (if observed): Type: _____	
Depth (Inches): _____	Hydric Soil Present? Yes No X
Remarks: _____	

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
Surface Water (A1)	Water Stained Leaves (B9)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)		
Saturation (A3)	True Aquatic Plants (B14)	Dry-Season Water Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soil (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Concave Surface	Other			
Field Observations: Surface Water Present? Yes _____ No <u>X</u>	Depth (inches) _____	Hydrology Indicators Present? Yes No X		
Water Table Present? Yes <u>X</u> No _____	Depth (inches) <u>16</u>			
Saturation Present? Yes _____ No <u>X</u>	Depth (inches) _____			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: WL-18
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Concave
 Slope (%): Lat. 39.729007 Long. -82.633563 Datum NAD83 NWI Class: PEM
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u>x</u> No <u> </u>
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>98</u> x <u>2</u> = <u>196</u> FAC species <u>2</u> x <u>3</u> = <u>6</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> = <u>202</u> Prevalence Index: <u>2.02</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Phalaris arundinacea</u>		<u>98</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u>Apocynum cannabinum</u>		<u>2</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-5	10YR 3/2	95	10YR 5/6	5	C		M	Si C L
5-18	10YR 4/2	95	10YR 5/6	5	C		M	Si C L

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>x</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	Hydric Soil Present? Yes <u>x</u> No <u> </u>
Depth (Inches): <u> </u>	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u>x</u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>x</u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		

Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches)	Hydrology Indicators Present? Yes <u>x</u> No <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches)	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches)	

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: UPL-18
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex
 Slope (%): Lat. 39.728973 Long. -82.633588 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>					Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		0	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u>Catalpa speciosa</u>		50	Y	FACU 4	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>55</u> x <u>2</u> = <u>110</u> FAC species <u>2</u> x <u>3</u> = <u>6</u> FACU species <u>75</u> x <u>4</u> = <u>300</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>132</u> Prevalence Index: <u>3.15</u>
2. <u>Rosa multiflora</u>		15	Y	FACU 4	
3. <u>Crataegus crus-galli</u>		2	N	FAC 3	
4. <u> </u>					
5. <u> </u>		67	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Elymus virginicus</u>		50	Y	FACW 2	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
2. <u>Taraxacum officinale</u>		10	N	FACU 4	
3. <u>Phalaris arundinacea</u>		5	N	FACW 2	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		65	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
2. <u> </u>		0	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix			Redox Features					
	Color	%	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100						Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>				
Depth (Inches): <u> </u>	Hydric Soil Present?	Yes	No	x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)		
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)		
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)		
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)		
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)		
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)		
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)		
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)		
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)			
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other			
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x		
Water Table Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>			
Saturation Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 33A
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex
 Slope (%): 1-3 Lat. 39.887537 Long. -82.567358 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>97</u> x <u>4</u> = <u>388</u> UPL species <u>2</u> x <u>5</u> = <u>10</u> Total <u>109</u> Prevalence Index: <u>3.93</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u>Rubus allegheniensis</u>	<u>15'</u>	<u>50</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Ligustrum vulgare</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>55</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Solidago canadensis</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Poa pratensis</u>		<u>10</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
3. <u>Cirsium arvense</u>		<u>2</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
4. <u>Daucus carota</u>		<u>2</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>54</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> <u> </u>

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 33
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex
 Slope (%): 1-3 Lat. 39.886661 Long. -82.567648 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>40</u> Prevalence Index: <u>3.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>40</u> Prevalence Index: <u>3.00</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> x Dominance Test is >50% <u> </u> x Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
1. <u> </u>	<u>15'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
1. <u>Barbarea vulgaris</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>FAC 3</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
40 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
0 Total Cover					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-14	10YR 3/1	100					Si C L	
14-18	10YR 3/1	95	10YR 5/6	5			Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> <u> </u>
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 31
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex
 Slope (%): 1-3 Lat. 39.884459 Long. -82.569989 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>5</u> x <u>2</u> = <u>10</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>7</u> x <u>4</u> = <u>28</u> UPL species <u>88</u> x <u>5</u> = <u>440</u> Total <u>100</u> Prevalence Index: <u>4.78</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum Plot size: <u>5'</u>					
1. <u>Lamium purpureum</u>		<u>48</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Zea mays residue</u>		<u>40</u>	<u>Y</u>	<u>UPL 5</u>	
3. <u>Conium maculatum</u>		<u>5</u>	<u>N</u>	<u>FACW 2</u>	
4. <u>Stellaria media</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
5. <u>Allium vineale</u>		<u>2</u>	<u>N</u>	<u>FACU 4</u>	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/1	100					C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> <u> </u>
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 28
 Client: AEP State: OH Section, Township, Range: Sec S7, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex
 Slope (%): 1-3 Lat. 39.877952 Long. -82.574087 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>60</u> x <u>5</u> = <u>300</u> Total <u>60</u> Prevalence Index: <u>5.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Glycine max residue</u>	<u>5'</u>	<u>60</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>60</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
3. <u> </u>		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type*	Loc**	Texture Si C L		
0-18	10YR 3/2	100							

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 25
 Client: AEP State: OH Section, Township, Range: Sec S7, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex
 Slope (%): 1-3 Lat. 39.871979 Long. -82.576534 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>50</u> x <u>2</u> = <u>100</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>18</u> x <u>4</u> = <u>72</u> UPL species <u>30</u> x <u>5</u> = <u>150</u> Total <u>98</u> Prevalence Index: <u>3.29</u>
1. <u>Rubus allegheniensis</u>	<u>15'</u>	<u>5</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Rosa multiflora</u>		<u>3</u>	<u>N</u>	<u>FACU 4</u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u>Conium maculatum</u>	<u>5'</u>	<u>30</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Lamium purpureum</u>		<u>30</u>	<u>Y</u>	<u>UPL 5</u>	
3. <u>Cyperus esculentus</u>		<u>20</u>	<u>Y</u>	<u>FACW 2</u>	
4. <u>Stellaria media</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
90 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-18	10YR 3/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 22
 Client: AEP State: OH Section, Township, Range: Sec S18, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform: Moraines Local Relief: Convex
 Slope (%): 1-3 Lat. 39.866541 Long. -82.578898 Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>20</u> x <u>3</u> = <u>60</u> FACU species <u>25</u> x <u>4</u> = <u>100</u> UPL species <u>40</u> x <u>5</u> = <u>200</u> Total <u>85</u> Prevalence Index: <u>4.24</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u> </u>	<u>15'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Glycine max residue</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Barbarea vulgaris</u>		<u>20</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u>Stellaria media</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
4. <u>Allium vineale</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>85</u>	Total Cover		
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> <u> </u>
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 19
 Client: AEP State: OH Section, Township, Range: Sec S18, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.860215 Long. -82.581483 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>5</u> x <u>3</u> = <u>15</u> FACU species <u>20</u> x <u>4</u> = <u>80</u> UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>95</u> Prevalence Index: <u>4.68</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Shrub Stratum Plot size: <u>15'</u>	Absolute % Cover	Dominant Species	Indicator Status	UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>95</u> Prevalence Index: <u>4.68</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>95</u> Prevalence Index: <u>4.68</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u>Zea mays residue</u>	<u>70</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Stellaria media</u>	<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Barbarea vulgaris</u>	<u>5</u>	<u>N</u>	<u>FAC 3</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Woody Vine Stratum Plot size: <u>5'</u>	Absolute % Cover	Dominant Species	Indicator Status	UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>95</u> Prevalence Index: <u>4.68</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 16
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.854232 Long. -82.583901 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Shrub Stratum Plot size: <u>15'</u>	<u>0</u> Total Cover			Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>45</u> x <u>2</u> = <u>90</u> FAC species <u>20</u> x <u>3</u> = <u>60</u> FACU species <u>5</u> x <u>4</u> = <u>20</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>80</u> Prevalence Index: <u>2.75</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum Plot size: <u>5'</u>	<u>80</u> Total Cover			Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>x</u> Dominance Test is >50% <u>x</u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
1. <u>Phalaris arundinacea</u>	<u>45</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
2. <u>Apocynum cannabinum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
3. <u>Echinacea pallida</u>	<u>10</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. <u>Allium vineale</u>	<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Woody Vine Stratum Plot size: <u>30'</u>	<u>0</u> Total Cover			
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type*	Loc**	Texture Si C L		
0-18	10YR 3/2	100							

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 14
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Lake Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.851571 Long. -82.584979 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>90</u> x <u>5</u> = <u>450</u> Total <u>90</u> Prevalence Index: <u>5.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum Plot size: <u>5'</u>					
1. <u>Glycine max residue</u>		<u>60</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Lolium multiflorum</u>		<u>30</u>	<u>Y</u>	<u>UPL 5</u>	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>90</u>	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type*	Loc**	Texture		
0-4	10YR 2/2	100						C L	
4-18	10YR 2/2	95	10YR 4/6	5	C		M	C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>x</u>	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u>	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u>	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	<u> </u>	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u>	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u>	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u>	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u>	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present? Yes x No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 12
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 18W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.845994 Long. -82.587370 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>65</u> x <u>4</u> = <u>260</u> UPL species <u>50</u> x <u>5</u> = <u>250</u> Total <u>125</u> Prevalence Index: <u>4.32</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u><i>Pyrus calleryana</i></u>	<u>15'</u>	<u>40</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u><i>Sambucus canadensis</i></u>		<u>15</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u><i>Lonicera maackii</i></u>		<u>10</u>	<u>N</u>	<u>UPL 5</u>	
4. <u> </u>					
5. <u> </u>		<u>65</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u><i>Allium vineale</i></u>	<u>5'</u>	<u>30</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u><i>Solidago canadensis</i></u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u><i>Poa pratensis</i></u>		<u>10</u>	<u>N</u>	<u>FAC 3</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>60</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-18	10YR 4/2	100					Si C L		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 10
 Client: AEP State: OH Section, Township, Range: Sec S24, T 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Lake Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.843258 Long. -82.588475 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u>x</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
Total Cover: <u>0</u>					Prevalence Index Worksheet Total % cover of: OBL species <u>10</u> x <u>1</u> = <u>10</u> FACW species <u>30</u> x <u>2</u> = <u>60</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>75</u> x <u>4</u> = <u>300</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>150</u> Prevalence Index: <u>3.23</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Cornus alba</u>	<u>15'</u>	<u>30</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Rubus allegheniensis</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Rosa multiflora</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
4. <u>Lonicera maackii</u>		<u>5</u>	<u>N</u>	<u>UPL 5</u>	
Total Cover: <u>65</u>					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u>Solidago canadensis</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Juncus tenuis</u>		<u>15</u>	<u>N</u>	<u>FAC 3</u>	
3. <u>Poa pratensis</u>		<u>15</u>	<u>N</u>	<u>FAC 3</u>	
4. <u>Juncus effusus</u>		<u>10</u>	<u>N</u>	<u>OBL 1</u>	
5. <u>Symphyotrichum ericoides</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
Total Cover: <u>85</u>					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
Total Cover: <u>0</u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Texture	Remarks
0-6	10YR 4/1	100					Si L	
6-18	10YR 4/1	95	10YR 5/6	5	C	M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u>x</u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present? Yes x No

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:
No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 8
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.838578 Long. -82.590298 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks:	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>80</u> x <u>5</u> = <u>400</u> Total <u>80</u> Prevalence Index: <u>5.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Triticum aestivum residue</u>	<u>5'</u>	<u>80</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>80</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 6
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Terrances Local Relief Convex
 Slope (%): 1-3 Lat. 39.836914° Long. -82.590981° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>1</u> Prevalence Index: <u>1.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Carex atherodes</u>	<u>5'</u>	<u>Y</u>	<u>100</u>	<u>OBL 1</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>0</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% X Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
								Residential, no soil pit taker

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks: No soil pit taken, residential area

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 4
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.833067° Long. -82.591983° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>30</u> x <u>1</u> = <u>30</u> FACW species <u>15</u> x <u>2</u> = <u>30</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>45</u> x <u>4</u> = <u>180</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>2.70</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Juncus effusus</u>		<u>30</u>	<u>Y</u>	<u>OBL</u> <u>1</u>	
2. <u>Solidago canadensis</u>		<u>25</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Schedonorus arundinaceus</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
4. <u>Dichantheium clandestinum</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
5. <u>Apocynum cannabinum</u>		<u>10</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
6. <u>Cyperus strigosus</u>		<u>5</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type*	Loc**	Texture		
0-15	7.5YR 4/2	100					M	SiL	
15-18	10YR 4/2	95	10YR 4/6	5	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u>
Depth (Inches): <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u>X</u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u>X</u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other
<u> </u> Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u>X</u> No <u> </u>
Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches) <u>4</u>	
Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches) <u>4</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 4A
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.832183° Long. -82.592208° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>100</u> x <u>5</u> = <u>500</u> Total <u>101</u> Prevalence Index: <u>4.96</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Zea mays residue</u>		<u>100</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					SIL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u>
Depth (Inches): <u> </u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u>
Water Table Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u> </u> Depth (inches) <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 3
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Flood Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.830922° Long. -82.592558° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>5</u> Total number of dominant species across all strata: <u>7</u> Percent of dominant species that are OBL, FACW, or FAC: <u>71.43</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>85</u> x <u>2</u> = <u>170</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>15</u> x <u>4</u> = <u>60</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>101</u> Prevalence Index: <u>2.29</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Verbesina alternifolia</u>		<u>25</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Solidago canadensis</u>		<u>20</u>	<u>Y</u>	<u>FACW</u>	<u>2</u>
3. <u>Urtica dioica</u>		<u>20</u>	<u>Y</u>	<u>FACW</u>	<u>2</u>
4. <u>Thalictrum dasycarpum</u>		<u>10</u>	<u>N</u>	<u>FACW</u>	<u>2</u>
5. <u>Conium maculatum</u>		<u>10</u>	<u>N</u>	<u>FACW</u>	<u>2</u>
6. <u>Schedonorus arundinaceus</u>		<u>10</u>	<u>N</u>	<u>FACU</u>	<u>4</u>
7. <u>Allium canadense</u>		<u>5</u>	<u>N</u>	<u>FACU</u>	<u>4</u>
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					SIL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> x Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> x FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)
Hydrology Indicators Present? Yes x No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 2
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Terrances Local Relief Convex
 Slope (%): 1-3 Lat. 39.829667° Long. -82.592922° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>16.67</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>10</u> x <u>4</u> = <u>40</u> UPL species <u>55</u> x <u>5</u> = <u>275</u> Total <u>76</u> Prevalence Index: <u>4.42</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Zea mays</u>		<u>30</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Brassica rapa</u>		<u>15</u>	<u>Y</u>	<u>UPL 5</u>	
3. <u>Lamium purpureum</u>		<u>10</u>	<u>Y</u>	<u>UPL 5</u>	
4. <u>Packera glabella</u>		<u>10</u>	<u>Y</u>	<u>FACW 2</u>	
5. <u>Allium canadense</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
6. <u>Stellaria media</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
7. <u> </u>					
8. <u> </u>					
		<u>75</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					SIL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks: No soil pit taken, residential area

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators
Primary Indicators (check all that apply)		
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)	
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other	

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 71
 Client: AEP State: OH Section, Township, Range: Sec S36, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.826230° Long. -82.593620° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes

Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic

Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>4</u> Total number of dominant species across all strata: <u>9</u> Percent of dominant species that are OBL, FACW, or FAC: <u>44.44</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>40</u> x <u>2</u> = <u>80</u> FAC species <u>5</u> x <u>3</u> = <u>15</u> FACU species <u>55</u> x <u>4</u> = <u>220</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>111</u> Prevalence Index: <u>3.30</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Cornus alba</u>	<u>15'</u>	<u>30</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Rubus allegheniensis</u>		<u>15</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Lonicera morrowii</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
4. <u>Prunus serotina</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
60 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Solidago altissima</u>	<u>5'</u>	<u>25</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Epilobium coloratum</u>		<u>20</u>	<u>Y</u>	<u>OBL 1</u>	
3. <u>Brassica rapa</u>		<u>10</u>	<u>N</u>	<u>UPL 5</u>	
4. <u>Symphotrichum lateriflorum</u>		<u>10</u>	<u>N</u>	<u>FACW 2</u>	
5. <u>Xanthium strumarium</u>		<u>5</u>	<u>N</u>	<u>FAC 3</u>	
70 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
0 Total Cover					
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-12	10YR 4/2	100					SiCL	
12-18	10YR 4/1	100					SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	<u> </u>
X <u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	<u> </u>
X <u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	<u> </u>
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	<u> </u>
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	<u> </u>
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	<u> </u>
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	X <u> </u> Geomorphic Position (D2)	<u> </u>
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	<u> </u>
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)	<u> </u>	<u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other	<u> </u>	<u> </u>

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes X No Depth (inches) 2
 Saturation Present? Yes X No Depth (inches) 2 **Hydrology Indicators Present?** Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 70
 Client: AEP State: OH Section, Township, Range: Sec S36, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.824939° Long. -82.594821° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>55</u> x <u>3</u> = <u>165</u> FACU species <u>35</u> x <u>4</u> = <u>140</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>101</u> Prevalence Index: <u>3.52</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Setaria faberi</u>	<u>5'</u>	<u>35</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Setaria pumila</u>		<u>35</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
3. <u>Poa pratensis</u>		<u>20</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
4. <u>Zea mays</u>		<u>10</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-10	10YR 4/2	100						SiCL	
10-18	10YR 5/1	90	10YR 5/6	10	C		M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u>X</u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes X No

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
No hydric indicators	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 68
 Client: AEP State: OH Section, Township, Range: S36, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.821591° Long. -82.598206° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>7</u> Percent of dominant species that are OBL, FACW, or FAC: <u>42.86</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>13</u> x <u>2</u> = <u>26</u> FAC species <u>60</u> x <u>3</u> = <u>180</u> FACU species <u>55</u> x <u>4</u> = <u>220</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>139</u> Prevalence Index: <u>3.43</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u>Rubus allegheniensis</u>		<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Elaeagnus umbellata</u>		<u>10</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>40</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Poa pratensis</u>		<u>60</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
2. <u>Taraxacum officinale</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Wisteria frutescens</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
4. <u>Solidago canadensis</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. <u>Viola renifolia</u>		<u>3</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
6. <u> </u>		<u>2</u>	<u>N</u>		
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Texture	Remarks
	Color	%	Color	%	Type*	Loc**				
0-15	10YR 4/2	100							SIL	
15-18	10YR 4/4	100							SiL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 63
 Client: AEP State: OH Section, Township, Range: Sec S36, T 16N, R 19W
 Investigator(s): L. Vine, E.Holt Landform: Moraines Local Relief: Convex
 Slope (%): 1-3 Lat. 39.813840° Long. -82.606066° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u> </u> X <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>101</u> Prevalence Index: <u>3.97</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Schedonorus arundinaceus</u>		<u>100</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> x Dominance Test is >50% <u> </u> x Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
								No soil pit, residential

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No

Remarks: No soil pit was taken; this is a residential area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u>X</u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 62 A
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.812051 Long. -82.608505 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>4</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>66.67</u>
1. <u>Acer rubrum</u>	<u>30'</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	<u>3</u>	
2. <u> </u>						
3. <u> </u>						
4. <u> </u>						
					<u>30</u>	Prevalence Index Worksheet
						Total % cover of:
						OBL species <u>1</u> x <u>1</u> = <u>1</u>
						FACW species <u>0</u> x <u>2</u> = <u>0</u>
						FAC species <u>70</u> x <u>3</u> = <u>210</u>
						FACU species <u>10</u> x <u>4</u> = <u>40</u>
						UPL species <u>15</u> x <u>5</u> = <u>75</u>
						Total <u>96</u> = <u>326</u>
						Prevalence Index: <u>3.40</u>
						Hydrophytic Vegetation Indicators:
						x Rapid Test for Hydrophytic Veg.
						x Dominance Test is >50%
						Prevalence Index is ≤3.0*
						Morphological Adaptations*
						Problematic Hydrophytic Vegetation*
						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
						Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Lonicera maackii</u>	<u>15'</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	<u>5</u>	
2. <u> </u>						
3. <u> </u>						
4. <u> </u>						
5. <u> </u>						
					<u>15</u>	Total Cover
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Typha angustifolia</u>	<u>5'</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	<u>1</u>	
2. <u>Barbarea vulgaris</u>		<u>20</u>	<u>Y</u>	<u>FAC</u>	<u>3</u>	
3. <u>Poa pratensis</u>		<u>20</u>	<u>Y</u>	<u>FAC</u>	<u>3</u>	
4. <u>Prunus serotina</u>		<u>10</u>	<u>N</u>	<u>FACU</u>	<u>4</u>	
5. <u> </u>						
6. <u> </u>						
7. <u> </u>						
8. <u> </u>						
					<u>100</u>	Total Cover
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status		
1. <u> </u>	<u>30'</u>					
2. <u> </u>						
					<u>0</u>	Total Cover
Remarks:						

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-15	10YR 4/2	100					SIL	
15-18	10YR 4/4	85	10YR 4/6	15	C	M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u>X</u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>X</u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes X No 15 Depth (inches)

Hydrology Indicators Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 62
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.811394° Long. -82.608382° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>50</u> x <u>3</u> = <u>150</u> FACU species <u>20</u> x <u>4</u> = <u>80</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>86</u> Prevalence Index: <u>3.21</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u>Cornus racemosa</u>		<u>50</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>50</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Schedonorus arundinaceus</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Symphotrichum lateriflorum</u>		<u>10</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
3. <u>Brassica rapa</u>		<u>5</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>35</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-14	10YR 4/3	100					SIL	
14-18	10YR 4/4	100					SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present?	Yes <u> </u>	No <u> </u>	X <u> </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators	
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u>X</u> <u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations:	Surface Water Present? Yes <u> </u> No <u>X</u>	Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u>X</u> No <u> </u>
	Water Table Present? Yes <u>X</u> No <u> </u>	7 Depth (inches) <u> </u>	
	Saturation Present? Yes <u>X</u> No <u> </u>	7 Depth (inches) <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 59
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.806567° Long. -82.612869° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>40.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>60</u> x <u>4</u> = <u>240</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>91</u> Prevalence Index: <u>3.64</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Rubus allegheniensis</u>	<u>15'</u>	<u>10</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Mentha X rotundifolia</u>		<u>10</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
20 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Setaria faberi</u>	<u>5'</u>	<u>30</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Allium canadense</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Apocynum cannabinum</u>		<u>20</u>	<u>Y</u>	<u>FAC 3</u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
70 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Remarks:					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-18	10YR 4/3						SIL		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 57
 Client: AEP State: OH Section, Township, Range: Sec S2, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.803787 Long. -82.615001 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>50</u> x <u>2</u> = <u>100</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>20</u> x <u>4</u> = <u>80</u> UPL species <u>30</u> x <u>5</u> = <u>150</u> Total <u>100</u> = <u>330</u> Prevalence Index: <u>3.30</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Elymus virginicus</u>	<u>5'</u>	<u>50</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
2. <u>Brassica napus</u>		<u>20</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
3. <u>Setaria faberi</u>		<u>15</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
4. <u>Lamium purpureum</u>		<u>10</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
5. <u>Taraxacum officinale</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-4	10YR 3/4	100					Si C L	
4-18	10YR 4/3	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present?	Yes <u> </u>	No <u> </u>	x <u> </u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators	
Primary Indicators (check all that apply)			
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		

Field Observations:	Surface Water Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
	Water Table Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>	
	Saturation Present? Yes <u> </u> No <u>x</u>	Depth (inches) <u> </u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 52
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform: Moraines Local Relief: Convex
 Slope (%): 1-3 Lat. 39.796059 Long. -82.620611 Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>50</u> x <u>2</u> = <u>100</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>65</u> x <u>4</u> = <u>260</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>120</u> Prevalence Index: <u>3.21</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Rubus allegheniensis</u>	<u>15'</u>	<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
20 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Carex vulpinoidea</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Schedonorus arundinaceus</u>		<u>35</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Cyperus esculentus</u>		<u>10</u>	<u>N</u>	<u>FACW 2</u>	
4. <u>Symphotrichum ericoides</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
5. <u>Daucus carota</u>		<u>5</u>	<u>N</u>	<u>UPL 5</u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
100 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-14	10YR 4/1	100						Si C L	
14-18	10YR 4/1	95	10YR 5/6	5	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 27 March 2024 Data Point: 51
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.794865 Long. -82.621345 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes <u>x</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

Remarks: _____

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>95</u> x <u>4</u> = <u>380</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>105</u> Prevalence Index: <u>4.10</u>
1. <u>Rubus occidentalis</u>	<u>15'</u>	<u>10</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>10</u>	Total Cover	_____	
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ x
1. <u>Bromus inermis</u>	<u>5'</u>	<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Setaria faberi</u>	_____	<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Solidago canadensis</u>	_____	<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
4. <u>Allium vineale</u>	_____	<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>95</u>	Total Cover	_____	
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	<u>0</u>	Total Cover	_____	

Remarks: _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/1	95	10YR 5/6	5	C	M	Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	<u>x</u> Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____
 Depth (Inches): _____
 Hydric Soil Present? Yes x No _____

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	_____
_____ Sparsely Vegetated Concave Surface	_____
_____ Water Stained Leaves (B9)	_____
_____ Aquatic Fauna (B13)	_____
_____ True Aquatic Plants (B14)	_____
_____ Hydrogen Sulfide Odor (C1)	_____
_____ Oxidized Rhizospheres on Living Roots	_____
_____ Presence of Reduced Iron (C4)	_____
_____ Recent Iron Reduction in Tilled Soil (C6)	_____
_____ Thin Muck Surface (C7)	_____
_____ Gauge or Well Data (D9)	_____
_____ Other	_____

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____
 Hydrology Indicators Present? Yes _____ No _____ x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 27 March 2024 Data Point: 48
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.789262 Long. -82.623285 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	
Remarks: _____	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>95</u> x <u>4</u> = <u>380</u> UPL species <u>7</u> x <u>5</u> = <u>35</u> Total <u>102</u> Prevalence Index: <u>4.07</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum	Plot size: <u>15'</u>	_____	_____	_____	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ x
1. <u>Rhus typhina</u>	_____	<u>2</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>2</u>	Total Cover	_____	
Herb Stratum	Plot size: <u>5'</u>	_____	_____	_____	
1. <u>Solidago canadensis</u>	_____	<u>40</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Schedonorus arundinaceus</u>	_____	<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Setaria faberi</u>	_____	<u>25</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
4. <u>Daucus carota</u>	_____	<u>5</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>100</u>	Total Cover	_____	
Woody Vine Stratum	Plot size: <u>30'</u>	_____	_____	_____	
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
_____	_____	<u>0</u>	Total Cover	_____	
Remarks: _____					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____

Remarks: _____

Hydric Soil Present? Yes _____ No _____ x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other
Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches) _____	Hydrology Indicators Present? Yes _____ No _____ x
Water Table Present? Yes _____ No <u>x</u> Depth (inches) _____	
Saturation Present? Yes _____ No <u>x</u> Depth (inches) _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 27 March 2024 Data Point: 46
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.783994 Long. -82.624965 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>80</u> x <u>4</u> = <u>320</u> UPL species <u>30</u> x <u>5</u> = <u>150</u> Total <u>110</u> Prevalence Index: <u>4.27</u>
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	0	Total Cover	_____	
Shrub Stratum	Plot size: 15'				
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	0	Total Cover	_____	
Herb Stratum	Plot size: 5'				
1. <u>Schedonorus arundinaceus</u>	_____	40	Y	FACU	4
2. <u>Lamium purpureum</u>	_____	30	Y	UPL	5
3. <u>Stellaria media</u>	_____	20	N	FACU	4
4. <u>Taraxacum officinale</u>	_____	10	N	FACU	4
5. <u>Trifolium repens</u>	_____	10	N	FACU	4
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____
		110	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
		0	Total Cover		

Remarks: _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____ **Hydric Soil Present?** Yes _____ No _____ x

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators
Primary Indicators (check all that apply)		
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)	
_____ Sparsely Vegetated Concave Surface	_____ Other	

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____ **Hydrology Indicators Present?** Yes _____ No _____ x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 27 March 2024 Data Point: 44
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Morines Local Relief Convex
 Slope (%): 1-3 Lat. 39.780789 Long. -82.625887 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

Remarks: _____

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>7</u> Percent of dominant species that are OBL, FACW, or FAC: <u>14.29</u>
1. <u>Juglans nigra</u>	<u>30'</u>	<u>10</u>	<u>Y</u>	<u>FACU 4</u>	
2. _____					
3. _____					
4. _____					
<u>10</u> Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>145</u> x <u>4</u> = <u>580</u> UPL species <u>20</u> x <u>5</u> = <u>100</u> Total <u>185</u> Prevalence Index: <u>3.89</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Juglans nigra</u>	<u>15'</u>	<u>30</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Rosa multiflora</u>		<u>25</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Rubus caesius</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
<u>75</u> Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Bromus inermis</u>	<u>5'</u>	<u>50</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Conium maculatum</u>		<u>20</u>	<u>Y</u>	<u>FACW 2</u>	
3. <u>Lilium lancifolium</u>		<u>20</u>	<u>Y</u>	<u>UPL 5</u>	
4. <u>Allium vineale</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
<u>100</u> Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	<u>30'</u>				
2. _____					
<u>0</u> Total Cover					

Remarks: _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____ Hydric Soil Present? Yes _____ No _____ x

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators	
Primary Indicators (check all that apply)			
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)	
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)	
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)	
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)	
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)	
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)	
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____ Geomorphic Position (D2)	
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ FAC-Neutral Test (D5)	
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)		
_____ Sparsely Vegetated Concave Surface	_____ Other		

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____
 Hydrology Indicators Present? Yes _____ No _____ x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 42
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Convex
 Slope (%): Lat. 39.776710° Long. -82.627371° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u>
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>101</u> Prevalence Index: <u>3.97</u>
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
0 Total Cover					
Herb Stratum	Plot size: <u>5'</u>				Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u>
1. <u>Schedonorus arundinaceus</u>		<u>50</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Trifolium repens</u>		<u>30</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Plantago lanceolata</u>		<u>15</u>	<u>N</u>	<u>FACU 4</u>	
4. <u>Taraxacum officinale</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
100 Total Cover					
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
0 Total Cover					
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
								No soil pit taken, pasture

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No

Remarks: No soil pit taken, pasture land with farm animals present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 41
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform: _____ Local Relief: _____
 Slope (%): 5-8 Lat. 39.772667° Long. '-82.628789° Datum NAD83 NWI Class: _____
 Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the DP within a Wetland? Yes _____ No _____ X _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>5</u> Total number of dominant species across all strata: <u>11</u> Percent of dominant species that are OBL, FACW, or FAC: <u>45.45</u>
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	0	Total Cover	_____	
Shrub Stratum	Plot size: 15'	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>15</u> x <u>2</u> = <u>30</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>70</u> x <u>4</u> = <u>280</u> UPL species <u>30</u> x <u>5</u> = <u>150</u> Total <u>156</u> Prevalence Index: <u>3.72</u>
1. <u>Rhamnus cathartica</u>	_____	30	Y	FAC 3	
2. <u>Ailanthus altissima</u>	_____	15	Y	FACU 4	
3. <u>Sambucus nigra</u>	_____	10	N	FAC 3	
4. <u>Elaeagnus angustifolia</u>	_____	10	N	FACU 4	
5. _____	_____	65	Total Cover	_____	
Herb Stratum	Plot size: 5'	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ X _____
1. <u>Schedonorus arundinaceus</u>	_____	30	Y	FACU 4	
2. <u>Fragaria vesca</u>	_____	20	Y	UPL 5	
3. <u>Verbesina alternifolia</u>	_____	15	N	FACW 2	
4. <u>Carex frankii</u>	_____	10	N	OBL 1	
5. <u>Elymus canadensis</u>	_____	10	N	FACU 4	
6. <u>Verbascum thapsus</u>	_____	10	N	UPL 5	
7. <u>Arctium minus</u>	_____	5	N	FACU 4	
8. _____	_____	100	Total Cover	_____	
Woody Vine Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	_____	_____	_____	
9. _____	_____	_____	_____	_____	
10. _____	_____	_____	_____	_____	
11. _____	_____	_____	_____	_____	
12. _____	_____	_____	_____	_____	
13. _____	_____	_____	_____	_____	
14. _____	_____	_____	_____	_____	
15. _____	_____	_____	_____	_____	
16. _____	_____	_____	_____	_____	
17. _____	_____	_____	_____	_____	
18. _____	_____	_____	_____	_____	
19. _____	_____	_____	_____	_____	
20. _____	_____	_____	_____	_____	
21. _____	_____	_____	_____	_____	
22. _____	_____	_____	_____	_____	
23. _____	_____	_____	_____	_____	
24. _____	_____	_____	_____	_____	
25. _____	_____	_____	_____	_____	
26. _____	_____	_____	_____	_____	
27. _____	_____	_____	_____	_____	
28. _____	_____	_____	_____	_____	
29. _____	_____	_____	_____	_____	
30. _____	_____	_____	_____	_____	
31. _____	_____	_____	_____	_____	
32. _____	_____	_____	_____	_____	
33. _____	_____	_____	_____	_____	
34. _____	_____	_____	_____	_____	
35. _____	_____	_____	_____	_____	
36. _____	_____	_____	_____	_____	
37. _____	_____	_____	_____	_____	
38. _____	_____	_____	_____	_____	
39. _____	_____	_____	_____	_____	
40. _____	_____	_____	_____	_____	
41. _____	_____	_____	_____	_____	
42. _____	_____	_____	_____	_____	
43. _____	_____	_____	_____	_____	
44. _____	_____	_____	_____	_____	
45. _____	_____	_____	_____	_____	
46. _____	_____	_____	_____	_____	
47. _____	_____	_____	_____	_____	
48. _____	_____	_____	_____	_____	
49. _____	_____	_____	_____	_____	
50. _____	_____	_____	_____	_____	
51. _____	_____	_____	_____	_____	
52. _____	_____	_____	_____	_____	
53. _____	_____	_____	_____	_____	
54. _____	_____	_____	_____	_____	
55. _____	_____	_____	_____	_____	
56. _____	_____	_____	_____	_____	
57. _____	_____	_____	_____	_____	
58. _____	_____	_____	_____	_____	
59. _____	_____	_____	_____	_____	
60. _____	_____	_____	_____	_____	
61. _____	_____	_____	_____	_____	
62. _____	_____	_____	_____	_____	
63. _____	_____	_____	_____	_____	
64. _____	_____	_____	_____	_____	
65. _____	_____	_____	_____	_____	
66. _____	_____	_____	_____	_____	
67. _____	_____	_____	_____	_____	
68. _____	_____	_____	_____	_____	
69. _____	_____	_____	_____	_____	
70. _____	_____	_____	_____	_____	
71. _____	_____	_____	_____	_____	
72. _____	_____	_____	_____	_____	
73. _____	_____	_____	_____	_____	
74. _____	_____	_____	_____	_____	
75. _____	_____	_____	_____	_____	
76. _____	_____	_____	_____	_____	
77. _____	_____	_____	_____	_____	
78. _____	_____	_____	_____	_____	
79. _____	_____	_____	_____	_____	
80. _____	_____	_____	_____	_____	
81. _____	_____	_____	_____	_____	
82. _____	_____	_____	_____	_____	
83. _____	_____	_____	_____	_____	
84. _____	_____	_____	_____	_____	
85. _____	_____	_____	_____	_____	
86. _____	_____	_____	_____	_____	
87. _____	_____	_____	_____	_____	
88. _____	_____	_____	_____	_____	
89. _____	_____	_____	_____	_____	
90. _____	_____	_____	_____	_____	
91. _____	_____	_____	_____	_____	
92. _____	_____	_____	_____	_____	
93. _____	_____	_____	_____	_____	
94. _____	_____	_____	_____	_____	
95. _____	_____	_____	_____	_____	
96. _____	_____	_____	_____	_____	
97. _____	_____	_____	_____	_____	
98. _____	_____	_____	_____	_____	
99. _____	_____	_____	_____	_____	
100. _____	_____	_____	_____	_____	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Texture	Remarks
	Color	%	Color	%	Type*	Loc**	M			
0-8	10YR 4/2	95	10YR 5/4	5	C			M	SIL	
8-18	10YR 4/2	100							SIL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	X	Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____	Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____	Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____	Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____	Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____	Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____	Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____ **Hydric Soil Present?** Yes X No _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other

Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches) _____
 Water Table Present? Yes _____ No _____ Depth (inches) _____
 Saturation Present? Yes _____ No _____ Depth (inches) _____

Hydrology Indicators Present? Yes _____ No _____ X _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 40
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Convex
 Slope (%): Lat. 39.771423° Long. -82.629211° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>80</u> x <u>4</u> = <u>320</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>131</u> Prevalence Index: <u>3.52</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Rhamnus cathartica</u>	<u>15'</u>	<u>40</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
40 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Schedonorus arundinaceus</u>	<u>5'</u>	<u>80</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Conium maculatum</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
90 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-3	10YR 3/3	100						Impenetrable rock layer

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks: Impenetrable rock layer under 3"

Hydric Soil Present? Yes No X

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 39
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Convex
 Slope (%): Lat. 39.770633° Long. -82.629435° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda-Loudonville complex, 6 to 12 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u>
Hydric Soil Present? Yes <u> </u> No <u> </u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>101</u> Prevalence Index: <u>3.97</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Shrub Stratum Plot size: <u>15'</u>		<u>0</u>	Total Cover	<u> </u>	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum Plot size: <u>5'</u>		<u>80</u>	<u>Y</u>	<u>FACU</u>	<u>4</u>
1. <u>Schedonorus arundinaceus</u>	<u> </u>	<u>10</u>	<u>N</u>	<u>FACU</u>	<u>4</u>
2. <u>Allium canadense</u>	<u> </u>	<u>10</u>	<u>N</u>	<u>FACU</u>	<u>4</u>
3. <u>Trifolium repens</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Woody Vine Stratum Plot size: <u>30'</u>		<u>100</u>	Total Cover	<u> </u>	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Remarks: <u> </u>		<u>0</u>	Total Cover	<u> </u>	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>No soil pit, residential</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks: No soil pit taken, residential area

Hydric Soil Present? Yes No

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> <u> </u>
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> <u> </u>

Field Observations: Surface Water Present? Yes No Depth (inches)
 Water Table Present? Yes No Depth (inches)
 Saturation Present? Yes No Depth (inches)

Hydrology Indicators Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No hydric indicators

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 36
 Client: AEP State: OH Section, Township, Range: Sec S23, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.764870 Long. -82.631439 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

Remarks: _____

VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>4.00</u>
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum	Plot size: <u>15'</u>				
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Dactylis glomerata</u>	_____	<u>80</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Achillea millefolium</u>	_____	<u>10</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
3. <u>Trifolium repens</u>	_____	<u>10</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
4. _____	_____	_____	_____	_____	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>100</u>	Total Cover	_____	
Woody Vine Stratum	Plot size: <u>30'</u>				
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
_____	_____	<u>0</u>	Total Cover	_____	

Remarks: _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes _____ No _____ x
Depth (Inches): _____	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches) _____	Hydrology Indicators Present? Yes _____ No _____ x
Water Table Present? Yes _____ No <u>x</u> Depth (inches) _____	
Saturation Present? Yes _____ No <u>x</u> Depth (inches) _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 34
 Client: AEP State: OH Section, Township, Range: Sec S23, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.759099 Long. -82.633227 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x _____
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	
Remarks: _____	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>55</u> x <u>5</u> = <u>275</u> Total <u>95</u> Prevalence Index: <u>4.58</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Glycine max residue</u>		<u>50</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
2. <u>Stellaria media</u>		<u>40</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Lamium purpureum</u>		<u>5</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		<u>95</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. _____					
2. _____					
		<u>0</u>	Total Cover		
Remarks: _____					Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ x _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____

Remarks: _____

Hydric Soil Present? Yes _____ No _____ x _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other
Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches) _____ Water Table Present? Yes _____ No <u>x</u> Depth (inches) _____ Saturation Present? Yes _____ No <u>x</u> Depth (inches) _____	Hydrology Indicators Present? Yes _____ No _____ x _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 32
 Client: AEP State: OH Section, Township, Range: Sec S26, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Concave
 Slope (%): 1-3 Lat. 39.754944 Long. -82.634647 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Marengo clay loam
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No _____	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u>x</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>x</u>	
Remarks: Stormwater basin overflow area	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum Plot size: <u>15'</u>					
1. _____	_____	_____	_____	_____	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>100</u> x <u>2</u> = <u>200</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> = <u>200</u> Prevalence Index: <u>2.00</u>
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Herb Stratum Plot size: <u>5'</u>					
1. <u>Phalaris arundinacea</u>	_____	<u>100</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>x</u> Dominance Test is >50% <u>x</u> Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>100</u>	Total Cover	_____	
Woody Vine Stratum Plot size: <u>30'</u>					
1. _____	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
2. _____	_____	_____	_____	_____	
_____	_____	<u>0</u>	Total Cover	_____	
Remarks: _____					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-4	10YR 3/1	100						Si C L	
4-8	10YR 3/1	95	10YR 5/6	5	C		M	Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	<u>x</u> Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: Rip-rap Depth (Inches): 8 Hydric Soil Present? Yes x No

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Guage or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other
_____ Other	_____ Other
Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches) _____	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x
Water Table Present? Yes _____ No <u>x</u> Depth (inches) _____	
Saturation Present? Yes _____ No <u>x</u> Depth (inches) _____	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: _____	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 32A
 Client: AEP State: OH Section, Township, Range: Sec S26, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 2-5 Lat. 39.754906 Long. -82.634636 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Marengo clay loam
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>20</u> x <u>3</u> = <u>60</u> FACU species <u>70</u> x <u>4</u> = <u>280</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>3.60</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum	Plot size: <u>15'</u>	_____	_____	_____	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ x
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Herb Stratum	Plot size: <u>5'</u>	_____	_____	_____	
1. <u>Sorghum halepense</u>	_____	<u>60</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Ambrosia trifida</u>	_____	<u>10</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
3. <u>Conium maculatum</u>	_____	<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
4. <u>Solidago canadensis</u>	_____	<u>10</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. <u>Vernonia gigantea</u>	_____	<u>10</u>	<u>N</u>	<u>FAC</u> <u>3</u>	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>100</u>	Total Cover	_____	
Woody Vine Stratum	Plot size: <u>30'</u>	_____	_____	_____	
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
_____	_____	<u>0</u>	Total Cover	_____	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color	%	Color	%	Type*	Loc**			
0-18	10YR 3/1	100						Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____

Hydric Soil Present? Yes _____ No _____ x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____

Hydrology Indicators Present? Yes _____ No _____ x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 31A
 Client: AEP State: OH Section, Township, Range: Sec S26, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.753261 Long. -82.635187 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>45</u> x <u>3</u> = <u>135</u> FACU species <u>50</u> x <u>4</u> = <u>200</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>100</u> Prevalence Index: <u>3.60</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Schedonorus arundinaceus</u>		<u>50</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Poa pratensis</u>		<u>45</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
3. <u>Lamium purpureum</u>		<u>5</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. _____					
2. _____					
		<u>0</u>	Total Cover		

Remarks: _____

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Texture	Remarks
	Color	%	Color	%	Type*	Loc**	Si	C		
0-18	10YR 4/3	100								

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____ **Hydric Soil Present?** Yes _____ No _____ x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____

Hydrology Indicators Present? Yes _____ No _____ x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: _____ Date: 28 March 2024 Data Point: 26
 Client: AEP State: OH Section, Township, Range: Sec 26, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex
 Slope (%): 1-3 Lat. 39.743462 Long. -82.638348 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Centersburg silt loam, 2 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No _____ x _____
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

Remarks: _____

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>0</u>	Total Cover	_____	
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>75</u> x <u>4</u> = <u>300</u> UPL species <u>75</u> x <u>5</u> = <u>375</u> Total <u>150</u> Prevalence Index: <u>4.50</u>
1. <u>Pyrus calleryana</u>	<u>15'</u>	<u>40</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Lonicera maackii</u>	_____	<u>10</u>	<u>Y</u>	<u>UPL 5</u>	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	<u>50</u>	Total Cover	_____	
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. Dominance Test is <u>>50%</u> Prevalence Index is <u>≤3.0*</u> Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes _____ No _____ x _____
1. <u>Stellaria media</u>	<u>5'</u>	<u>50</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Euonymus fortunei</u>	_____	<u>20</u>	<u>Y</u>	<u>UPL 5</u>	
3. <u>Allium vineale</u>	_____	<u>10</u>	<u>N</u>	<u>FACU 4</u>	
4. <u>Cirsium arvense</u>	_____	<u>10</u>	<u>N</u>	<u>FACU 4</u>	
5. <u>Digitaria sanguinalis</u>	_____	<u>5</u>	<u>N</u>	<u>FACU 4</u>	
6. <u>Lamium purpureum</u>	_____	<u>5</u>	<u>N</u>	<u>UPL 5</u>	
7. _____	_____	_____	_____	_____	
8. _____	_____	<u>100</u>	Total Cover	_____	
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	<u>30'</u>	_____	_____	_____	
2. _____	_____	_____	_____	_____	
3. _____	_____	_____	_____	_____	
4. _____	_____	_____	_____	_____	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	_____	_____	_____	
9. _____	_____	_____	_____	_____	
10. _____	_____	_____	_____	_____	
11. _____	_____	_____	_____	_____	
12. _____	_____	_____	_____	_____	
13. _____	_____	_____	_____	_____	
14. _____	_____	_____	_____	_____	
15. _____	_____	_____	_____	_____	
16. _____	_____	_____	_____	_____	
17. _____	_____	_____	_____	_____	
18. _____	_____	_____	_____	_____	
19. _____	_____	_____	_____	_____	
20. _____	_____	_____	_____	_____	
21. _____	_____	_____	_____	_____	
22. _____	_____	_____	_____	_____	
23. _____	_____	_____	_____	_____	
24. _____	_____	_____	_____	_____	
25. _____	_____	_____	_____	_____	
26. _____	_____	_____	_____	_____	
27. _____	_____	_____	_____	_____	
28. _____	_____	_____	_____	_____	
29. _____	_____	_____	_____	_____	
30. _____	_____	_____	_____	_____	
31. _____	_____	_____	_____	_____	
32. _____	_____	_____	_____	_____	
33. _____	_____	_____	_____	_____	
34. _____	_____	_____	_____	_____	
35. _____	_____	_____	_____	_____	
36. _____	_____	_____	_____	_____	
37. _____	_____	_____	_____	_____	
38. _____	_____	_____	_____	_____	
39. _____	_____	_____	_____	_____	
40. _____	_____	_____	_____	_____	
41. _____	_____	_____	_____	_____	
42. _____	_____	_____	_____	_____	
43. _____	_____	_____	_____	_____	
44. _____	_____	_____	_____	_____	
45. _____	_____	_____	_____	_____	
46. _____	_____	_____	_____	_____	
47. _____	_____	_____	_____	_____	
48. _____	_____	_____	_____	_____	
49. _____	_____	_____	_____	_____	
50. _____	_____	_____	_____	_____	
51. _____	_____	_____	_____	_____	
52. _____	_____	_____	_____	_____	
53. _____	_____	_____	_____	_____	
54. _____	_____	_____	_____	_____	
55. _____	_____	_____	_____	_____	
56. _____	_____	_____	_____	_____	
57. _____	_____	_____	_____	_____	
58. _____	_____	_____	_____	_____	
59. _____	_____	_____	_____	_____	
60. _____	_____	_____	_____	_____	
61. _____	_____	_____	_____	_____	
62. _____	_____	_____	_____	_____	
63. _____	_____	_____	_____	_____	
64. _____	_____	_____	_____	_____	
65. _____	_____	_____	_____	_____	
66. _____	_____	_____	_____	_____	
67. _____	_____	_____	_____	_____	
68. _____	_____	_____	_____	_____	
69. _____	_____	_____	_____	_____	
70. _____	_____	_____	_____	_____	
71. _____	_____	_____	_____	_____	
72. _____	_____	_____	_____	_____	
73. _____	_____	_____	_____	_____	
74. _____	_____	_____	_____	_____	
75. _____	_____	_____	_____	_____	
76. _____	_____	_____	_____	_____	
77. _____	_____	_____	_____	_____	
78. _____	_____	_____	_____	_____	
79. _____	_____	_____	_____	_____	
80. _____	_____	_____	_____	_____	
81. _____	_____	_____	_____	_____	
82. _____	_____	_____	_____	_____	
83. _____	_____	_____	_____	_____	
84. _____	_____	_____	_____	_____	
85. _____	_____	_____	_____	_____	
86. _____	_____	_____	_____	_____	
87. _____	_____	_____	_____	_____	
88. _____	_____	_____	_____	_____	
89. _____	_____	_____	_____	_____	
90. _____	_____	_____	_____	_____	
91. _____	_____	_____	_____	_____	
92. _____	_____	_____	_____	_____	
93. _____	_____	_____	_____	_____	
94. _____	_____	_____	_____	_____	
95. _____	_____	_____	_____	_____	
96. _____	_____	_____	_____	_____	
97. _____	_____	_____	_____	_____	
98. _____	_____	_____	_____	_____	
99. _____	_____	_____	_____	_____	
100. _____	_____	_____	_____	_____	

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Texture	Remarks
	Color	%	Color	%	Type*	Loc**				
0-18	10YR 3/2	100						SiCL		

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____ **Hydric Soil Present?** Yes _____ No _____ X _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes _____ No x Depth (inches) _____
 Water Table Present? Yes _____ No x Depth (inches) _____
 Saturation Present? Yes _____ No x Depth (inches) _____ **Hydrology Indicators Present?** Yes _____ No _____ x _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 23
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.737525 Long. -82.641287 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Fox silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>70</u> x <u>4</u> = <u>280</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>3.70</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Schedonorus arundinaceus</u>		<u>40</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Poa pratensis</u>		<u>30</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
3. <u>Trifolium repens</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
4. <u>Digitaria sanguinalis</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. <u>Plantago lanceolata</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 22
 Client: AEP State: OH Section, Township, Range: Sec S 34, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex
 Slope (%): 1-3 Lat. 39.735590 Long. -82.641314 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Fox silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>45</u> x <u>4</u> = <u>180</u> UPL species <u>45</u> x <u>5</u> = <u>225</u> Total <u>130</u> Prevalence Index: <u>4.04</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Pyrus calleryana</u>	<u>15'</u>	<u>40</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
40 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Andropogon virginicus</u>	<u>5'</u>	<u>40</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Setaria pumila</u>		<u>30</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u>Verbena urticifolia</u>		<u>10</u>	<u>N</u>	<u>FAC 3</u>	
4. <u>Daucus carota</u>		<u>5</u>	<u>N</u>	<u>UPL 5</u>	
5. <u>Solidago canadensis</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
90 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
0 Total Cover					

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type*	Loc**	Texture		
0-7	10YR 3/3	100						Si C L	
7-18	10YR 4/3	100						L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 20
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.731196 Long. -82.636576 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks:	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>60</u> x <u>5</u> = <u>300</u> Total <u>100</u> Prevalence Index: <u>4.60</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum Plot size: <u>5'</u>					
1. <u>Glycine max residue</u>		<u>40</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
2. <u>Stellaria media</u>		<u>40</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Lamium purpureum</u>		<u>20</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 15
 Client: AEP State: OH Section, Township, Range: Sec S2, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.725039 Long. -82.632003 Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

Remarks:

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>66.67</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>30</u> x <u>2</u> = <u>60</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>2</u> x <u>4</u> = <u>8</u> UPL species <u>20</u> x <u>5</u> = <u>100</u> Total <u>92</u> Prevalence Index: <u>3.13</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u>Sambucus canadensis</u>	<u>15'</u>	<u>2</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>2</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Poa pratensis</u>	<u>30'</u>	<u>40</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
2. <u>Conium maculatum</u>		<u>20</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
3. <u>Echinacea pallida</u>		<u>20</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
4. <u>Phalaris arundinacea</u>		<u>10</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>90</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>5'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		

Remarks:

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture Si C L	Remarks
	Color	%	Color	%	Type*	Loc**		
0-18	10YR 3/2	100						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type:
 Depth (Inches):

Hydric Soil Present? Yes No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other
<u> </u> Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 13
 Client: AEP State: OH Section, Township, Range: Sec S2, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.722039 Long. -82.634875 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Urban land-Bennington complex, 0 to 6 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks:	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>60</u> x <u>3</u> = <u>180</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>3.40</u>
1. _____	<u>30'</u>	_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
		0	Total Cover		
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. _____	<u>15'</u>	_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
		0	Total Cover		
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Poa pratensis</u>	<u>5'</u>	<u>60</u>	<u>Y</u>	<u>FAC 3</u>	
2. <u>Glechoma hederacea</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u>Trifolium repens</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
6. _____		_____	_____	_____	
7. _____		_____	_____	_____	
8. _____		_____	_____	_____	
		100	Total Cover		
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	<u>30'</u>	_____	_____	_____	
2. _____		_____	_____	_____	
		0	Total Cover		
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ Thin Muck Surface (C7)	
_____ Gauge or Well Data (D9)	
_____ Other	

Field Observations: Surface Water Present? Yes No x Depth (inches) _____
 Water Table Present? Yes No x Depth (inches) _____
 Saturation Present? Yes No x Depth (inches) _____

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 11
 Client: AEP State: OH Section, Township, Range: Sec S3, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.718202 Long. -82.639982 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Marengo clay loam
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>95</u> x <u>4</u> = <u>380</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>100</u> Prevalence Index: <u>4.05</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum Plot size: <u>5'</u>					
1. <u>Dactylis glomerata</u>		<u>75</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Schedonorus arundinaceus</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Lamium purpureum</u>		<u>5</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> x
Depth (Inches): <u> </u>	
Remarks: <u> </u>	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators	
Primary Indicators (check all that apply)			
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>		Hydrology Indicators Present? Yes <u> </u> No <u> </u> x	
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>			
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u> </u>			

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 8A
 Client: AEP State: OH Section, Township, Range: Sec S3, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains1 Local Relief Convex
 Slope (%): 3-5 Lat. 39.714393 Long. -82.641548 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Amanda silt loam, 12 to 20 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
Total Cover: <u>0</u>					Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>140</u> x <u>4</u> = <u>560</u> UPL species <u>5</u> x <u>5</u> = <u>25</u> Total <u>175</u> Prevalence Index: <u>3.86</u>
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Sassafras albidum</u>	<u>15'</u>	<u>75</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Rosa multiflora</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
3. <u>Rubus allegheniensis</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
4. <u>Rubus occidentalis</u>		<u>5</u>	<u>N</u>	<u>UPL 5</u>	
Total Cover: <u>95</u>					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x
1. <u>Dactylis glomerata</u>	<u>5'</u>	<u>50</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Geum canadense</u>		<u>20</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u>Alliaria petiolata</u>		<u>10</u>	<u>N</u>	<u>FAC 3</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
Total Cover: <u>80</u>					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
Total Cover: <u>0</u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-8	10YR 3/2	100					Si C L	
8-18	10YR 4/3	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 7
 Client: AEP State: OH Section, Township, Range: Sec S3, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.712451 Long. -82.641544 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks:	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>73</u> x <u>4</u> = <u>292</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>113</u> Prevalence Index: <u>3.82</u>
1. <u>Rubus occidentalis</u>	<u>15'</u>	<u>10</u>	<u>Y</u>	<u>UPL 5</u>	
2. <u>Rosa multiflora</u>		<u>3</u>	<u>N</u>	<u>FACU 4</u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
13 Total Cover					
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Dactylis glomerata</u>	<u>5'</u>	<u>35</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Panicum virgatum</u>		<u>30</u>	<u>Y</u>	<u>FAC 3</u>	
3. <u>Solidago canadensis</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
4. <u>Schedonorus arundinaceus</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
5. <u>Taraxacum officinale</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
100 Total Cover					
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
0 Total Cover					
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-4	10YR 3/3	100					Si L	
4-18	10YR 4/4	100					Si C L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 5A
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.707972 Long. -82.640540 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks:	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>20</u> x <u>4</u> = <u>80</u> UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>90</u> Prevalence Index: <u>4.78</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum Plot size: <u>15'</u>					
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum Plot size: <u>5'</u>					
1. <u>Zea mays residue</u>		<u>60</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
2. <u>Stellaria media</u>		<u>20</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Lamium purpureum</u>		<u>10</u>	<u>N</u>	<u>UPL</u> <u>5</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
		<u>90</u>	Total Cover		
Woody Vine Stratum Plot size: <u>30'</u>					
1. <u> </u>					
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks:					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/4	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: <u> </u>	Hydric Soil Present? Yes <u> </u> No <u> </u> x
Depth (Inches): <u> </u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators	
Primary Indicators (check all that apply)			
<u> </u> Surface Water (A1)	<u> </u> Water Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u> </u> Saturation (A3)	<u> </u> True Aquatic Plants (B14)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soil (C6)	<u> </u> Geomorphic Position (D2)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> FAC-Neutral Test (D5)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Gauge or Well Data (D9)		
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other		
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 3A
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.704089 Long. -82.639314 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> = <u>400</u> Prevalence Index: <u>4.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:				
1. <u> </u>	<u>15'</u>				
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>		<u>0</u>	Total Cover		
Herb Stratum	Plot size:				
1. <u>Schedonorus arundinaceus</u>	<u>5'</u>	<u>100</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size:				
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/4	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
<u> </u> Water Stained Leaves (B9)	
<u> </u> Aquatic Fauna (B13)	
<u> </u> True Aquatic Plants (B14)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soil (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Gauge or Well Data (D9)	
<u> </u> Other	

Field Observations: Surface Water Present? Yes No x Depth (inches)
 Water Table Present? Yes No x Depth (inches)
 Saturation Present? Yes No x Depth (inches)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 1A
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex
 Slope (%): 1-3 Lat. 39.701956 Long. -82.638831 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Aetna silt loam, occasionally flooded
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u> </u> No <u>x</u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>20.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>70</u> x <u>2</u> = <u>140</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>100</u> x <u>4</u> = <u>400</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>180</u> Prevalence Index: <u>3.28</u>
1. <u>Juglans nigra</u>	<u>30'</u>	<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Robinia pseudoacacia</u>		<u>10</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u> </u>					
4. <u> </u>					
		<u>30</u>	Total Cover		
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Robinia pseudoacacia</u>	<u>15'</u>	<u>30</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Juglans nigra</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
3. <u> </u>					
4. <u> </u>					
		<u>50</u>	Total Cover		
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u>Conium maculatum</u>	<u>5'</u>	<u>70</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Allium vineale</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
3. <u>Lamium purpureum</u>		<u>10</u>	<u>N</u>	<u>UPL 5</u>	
4. <u>Symphotrichum ericoides</u>		<u>10</u>	<u>N</u>	<u>FACU 4</u>	
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u>
1. <u> </u>	<u>30'</u>				
2. <u> </u>					
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 1
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W
 Investigator(s): N. Houk, N. Barnett Landform Terrances Local Relief Convex
 Slope (%): 1-3 Lat. 39.701956 Long. -82.638831 Datum NAD83 NWI Class: NA
 Soil Map Unit Name: Thackery silt loam, 0 to 2 percent slopes
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation N, Soil N or Hydrology N significantly disturbed
 Vegetation N, Soil N or Hydrology N naturally problematic
 Are Normal Circumstances Present? Yes x No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>	Is the DP within a Wetland? Yes <u> </u> No <u> </u> x <u> </u>
Hydric Soil Present? Yes <u> </u> No <u>x</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>x</u>	
Remarks: <u> </u>	

VEGETATION

Tree Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u>
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
		<u>0</u>	Total Cover		
Shrub Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>40</u> x <u>2</u> = <u>80</u> FAC species <u>30</u> x <u>3</u> = <u>90</u> FACU species <u>105</u> x <u>4</u> = <u>420</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>175</u> Prevalence Index: <u>3.37</u>
1. <u>Robinia pseudoacacia</u>	<u>15'</u>	<u>80</u>	<u>Y</u>	<u>FACU 4</u>	
2. <u>Rubus allegheniensis</u>		<u>5</u>	<u>N</u>	<u>FACU 4</u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
		<u>85</u>	Total Cover		
Herb Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>x</u> Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u>
1. <u>Conium maculatum</u>	<u>5'</u>	<u>20</u>	<u>Y</u>	<u>FACW 2</u>	
2. <u>Phalaris arundinacea</u>		<u>20</u>	<u>Y</u>	<u>FACW 2</u>	
3. <u>Poa pratensis</u>		<u>20</u>	<u>Y</u>	<u>FAC 3</u>	
4. <u>Solidago canadensis</u>		<u>20</u>	<u>Y</u>	<u>FACU 4</u>	
5. <u>Alliaria petiolata</u>		<u>10</u>	<u>N</u>	<u>FAC 3</u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
		<u>90</u>	Total Cover		
Woody Vine Stratum	Plot size:	Absolute % Cover	Dominant Species	Indicator Status	
1. <u> </u>	<u>30'</u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
		<u>0</u>	Total Cover		
Remarks: <u> </u>					

SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si L	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<u> </u> Histosol (A1)	<u> </u> Sandy Mucky Mineral (S1)	<u> </u> Redox Dark Surface (F6)
<u> </u> Histic Epipedon (A2)	<u> </u> 5cm Mucky Peat or Peat	<u> </u> Depleted Dark Surface (F7)
<u> </u> Black Histic (A3)	<u> </u> Sandy Gleyed Matrix (S4)	<u> </u> Redox Depressions (F8)
<u> </u> Hydrogen Sulfide (A4)	<u> </u> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<u> </u> Stratified Layers (A5)	<u> </u> Stripped Matrix (S6)	<u> </u> Coast Prairie Redox (A16)
<u> </u> 2 cm Muck (A10)	<u> </u> Loamy Mucky Mineral (F1)	<u> </u> Iron-Manganese Masses (F12)
<u> </u> Depleted Below Dark Surface (A11)	<u> </u> Loamy Gleyed Matrix (F2)	<u> </u> Very Shallow Dark Surface (F12)
<u> </u> Thick Dark Surface (A12)	<u> </u> Depleted Matrix (F3)	<u> </u> Other

Restrictive Layer (if observed): Type: Depth (Inches):

Remarks:

Hydric Soil Present? Yes No x

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Guage or Well Data (D9)
<u> </u> Sparsely Vegetated Concave Surface	<u> </u> Other
Field Observations: Surface Water Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	Hydrology Indicators Present? Yes <u> </u> No <u> </u> x <u> </u>
Water Table Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Saturation Present? Yes <u> </u> No <u>x</u> Depth (inches) <u> </u>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: <u> </u>	

Appendix D

ORAM Forms



ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	4	
	Metric 3: Hydrology	17	
	Metric 4: Habitat	15.5	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	5	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	43.5	

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.

Final Category

Choose One	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

4	6
---	---

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

17	23
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12pts)
 - Recovered (7pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input type="checkbox"/> Ditch	<input type="checkbox"/> Point source (non-storm water)
<input type="checkbox"/> Tile	<input type="checkbox"/> Filing/grading
<input type="checkbox"/> Dike	<input type="checkbox"/> Road bed/RR track
<input type="checkbox"/> Weir	<input type="checkbox"/> Dredging
<input type="checkbox"/> Storm water input	<input type="checkbox"/> Other

15.5	38.5
------	------

Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- None or none apparent (9pts)
 - Recovered (6pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input type="checkbox"/> Mowing	<input type="checkbox"/> Shrub/sapling removal
<input type="checkbox"/> Grazing	<input type="checkbox"/> Herbaceous/aquatic bed removal
<input type="checkbox"/> Clear-cutting	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Selective cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Woody debris removal	<input checked="" type="checkbox"/> Farming
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Nutrient enrichment

38.5

Subtotal this page

38.5

Subtotal first page

0	38.5
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

5	43.5
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 2 | Emergent |
| 0 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography

Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 2 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

43.5

GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

	score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	1
7pts WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input checked="" type="checkbox"/>
0pts VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	3
7pts VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input checked="" type="checkbox"/>
3pts MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

6

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		1
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input checked="" type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

Check all that are observed present in or near the wetland

<input type="checkbox"/> ditch(es), in or near the wetland	<input type="checkbox"/> point source discharges to the (non-storm water)
<input type="checkbox"/> tile(s), in or near the wetland	<input type="checkbox"/> filling/grading activities in or near the wetland
<input type="checkbox"/> dike(s), in or near the wetland	<input type="checkbox"/> road beds/RR beds in or near the wetland
<input type="checkbox"/> weir(s), in or near the wetland	<input type="checkbox"/> dredging activities in or near the wetland
<input type="checkbox"/> storm water inputs (addition of water)	<input type="checkbox"/> other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?</p>	<p>YES</p> <p>Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 12 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check "none or none apparent" and "recovered" and assign a score of 9.5</p>
		X	

Select one or double check adjoining number and average the score.		score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	12
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input checked="" type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p> <p style="text-align: right;">3</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
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Select one or double check adjoining number and average the score.	score
4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
3pts RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

<p>4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.</p>	5
7pts EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input checked="" type="checkbox"/>
4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input type="checkbox"/>
3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input type="checkbox"/>
2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/> Mowing	<input type="checkbox"/> Herbaceous layer/aquatic bed removal
<input type="checkbox"/> Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Clear cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Selective cutting	<input checked="" type="checkbox"/> Farming
<input type="checkbox"/> Woody debris removal	<input type="checkbox"/> Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Other (specify)
<input type="checkbox"/> Shrub/sapling removal	<input type="checkbox"/> Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland’s natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
			X

Select one or double check adjoining number and average the score.		score
		7.5
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input checked="" type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input checked="" type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/> Bog (10pts)	<input type="checkbox"/> Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/> Fen (10 pts)	<input type="checkbox"/> Relict wet prairies (10 pts)
<input type="checkbox"/> Old Growth Forest (10 pts)	<input type="checkbox"/> Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/> Mature Forested Wetland (5 pts)	<input type="checkbox"/> Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/> Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/> Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/> Coastal wetlands, restricted hydrology (5 pts)	

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a. Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	2
<input type="checkbox"/> Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input type="checkbox"/> Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/> Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/> Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/> Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/> Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		0
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input checked="" type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		2
	Vegetated hummocks and tussocks.	<input checked="" type="checkbox"/>
	Coarse woody debris >15cm (6in) diameter	<input type="checkbox"/>
	Standing dead trees >25cm (10in) diameter at breast height	<input type="checkbox"/>
	Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

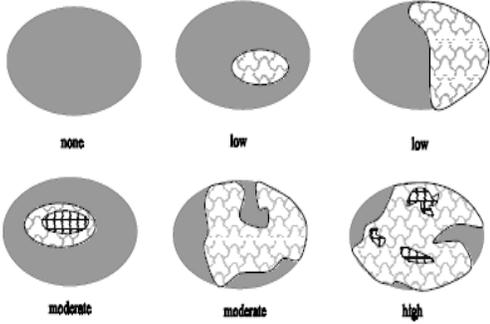


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	4	
	Metric 4: Habitat	3	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	3	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	2	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.</p>
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input checked="" type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.</p>

Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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1	1
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

1	2
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland PERIMETER (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

4	6
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | | | | | | | | | | | |
|---|---|--------------------------------|---|-------------------------------|---|-------------------------------|---|-------------------------------|-----------------------------------|--|--------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12pts) <input type="checkbox"/> Recovered (7pts) <input type="checkbox"/> Recovering (3pts) <input checked="" type="checkbox"/> Recent or no recovery (1pts) | <p style="text-align: center; font-weight: bold;">Check all disturbances observed</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> Ditch</td> <td><input type="checkbox"/> Point source (non-storm water)</td> </tr> <tr> <td><input type="checkbox"/> Tile</td> <td><input type="checkbox"/> Filing/grading</td> </tr> <tr> <td><input type="checkbox"/> Dike</td> <td><input checked="" type="checkbox"/> Road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> Weir</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Storm water input</td> <td><input type="checkbox"/> Other</td> </tr> </table> | <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | <input type="checkbox"/> Dike | <input checked="" type="checkbox"/> Road bed/RR track | <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other |
| <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | | | | | | | | | | |
| <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | | | | | | | | | | |
| <input type="checkbox"/> Dike | <input checked="" type="checkbox"/> Road bed/RR track | | | | | | | | | | |
| <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | | | | | | | | | | |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other | | | | | | | | | | |

3	9
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- | | | | | | | | | | | | | | |
|--|--|--|--|----------------------------------|---|--|--|--|-----------------------------------|---|---|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9pts) <input type="checkbox"/> Recovered (6pts) <input type="checkbox"/> Recovering (3pts) <input checked="" type="checkbox"/> Recent or no recovery (1pts) | <p style="text-align: center; font-weight: bold;">Check all disturbances observed</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> Mowing</td> <td><input type="checkbox"/> Shrub/sapling removal</td> </tr> <tr> <td><input type="checkbox"/> Grazing</td> <td><input type="checkbox"/> Herbaceous/aquatic bed removal</td> </tr> <tr> <td><input type="checkbox"/> Clear-cutting</td> <td><input type="checkbox"/> Sedimentation</td> </tr> <tr> <td><input type="checkbox"/> Selective cutting</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Woody debris removal</td> <td><input checked="" type="checkbox"/> Farming</td> </tr> <tr> <td><input type="checkbox"/> Toxic pollutants</td> <td><input type="checkbox"/> Nutrient enrichment</td> </tr> </table> | <input checked="" type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | <input type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | <input type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming | <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment |
| <input checked="" type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | | | | | | | | | | | | |
| <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | | | | | | | | | | | | |
| <input type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | | | | | | | | | | | | |
| <input type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | | | | | | | | | | | | |
| <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming | | | | | | | | | | | | |
| <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment | | | | | | | | | | | | |

9

Subtotal this page

9

Subtotal first page

-10	-1
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3	2
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent |
| 0 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| 0 | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

- Select only one.
- High (5pts)
 - Moderately high (4pts)
 - Moderate (3pts)
 - Moderately low (2pts)
 - Low (1pts)
 - None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography
Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

2

GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without “buffers,” or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.		0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland’s buffer zone (if any).		1
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

2

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		0
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal

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3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input checked="" type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
	X		

Select one or double check adjoining number and average the score.		score
		1
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input checked="" type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input checked="" type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
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Select one or double check adjoining number and average the score.		score
4pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
3pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
2pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input checked="" type="checkbox"/>

4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.		1
7pts	EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts	VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts	GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>
4pts	MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input type="checkbox"/>
3pts	FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input type="checkbox"/>
2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt	POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input checked="" type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
X			

Select one or double check adjoining number and average the score.			score
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	1
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input checked="" type="checkbox"/>	

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	1
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	1
<input type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

0

Subtotal

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input checked="" type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

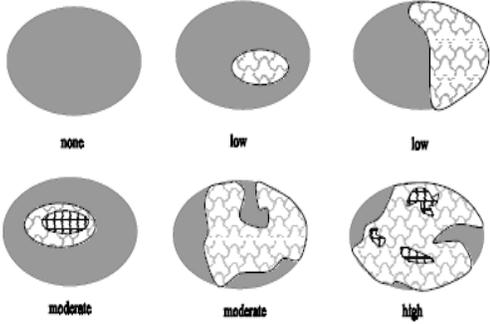


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	2	
	Metric 3: Hydrology	16	
	Metric 4: Habitat	7	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	2	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	18	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input type="checkbox"/> NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="checkbox"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.

Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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1	1
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

1	2
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

6	8
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12pts)
 - Recovered (7pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input type="checkbox"/> Ditch	<input type="checkbox"/> Point source (non-storm water)
<input type="checkbox"/> Tile	<input type="checkbox"/> Filing/grading
<input type="checkbox"/> Dike	<input type="checkbox"/> Road bed/RR track
<input type="checkbox"/> Weir	<input type="checkbox"/> Dredging
<input type="checkbox"/> Storm water input	<input type="checkbox"/> Other

9	17
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- None or none apparent (9pts)
 - Recovered (6pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input checked="" type="checkbox"/> Mowing	<input type="checkbox"/> Shrub/sapling removal
<input type="checkbox"/> Grazing	<input type="checkbox"/> Herbaceous/aquatic bed removal
<input checked="" type="checkbox"/> Clear-cutting	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Selective cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Woody debris removal	<input checked="" type="checkbox"/> Farming
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Nutrient enrichment

17

Subtotal this page

17

Subtotal first page

-10	7
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

14	21
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 3 | Emergent |
| 1 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| | Other _____ |

Vegetation Community Cover Scale	
0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality	
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality	
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography
Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 1 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale	
0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	2
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
<p>2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.</p>		
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
<p>2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).</p>		
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

3

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		1
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

12

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
		12	

Select one or double check adjoining number and average the score.		score
		3
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input checked="" type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

2

Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

YES

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

2

NO

Assign a score of 4 since there are no or no apparent modifications.

NOT SURE

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

2

- | | | |
|------|--|-------------------------------------|
| 4pts | NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater. | <input type="checkbox"/> |
| 3pts | RECOVERED. The wetland appears to have recovered from past modifications. | <input type="checkbox"/> |
| 2pts | RECOVERING. The wetland appears to be in the process of recovering from past modifications | <input checked="" type="checkbox"/> |
| 1pt | RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing. | <input type="checkbox"/> |

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

3

- | | | |
|------|--|-------------------------------------|
| 7pts | EXCELLENT. Wetland appears to represent the best of its type or class. | <input type="checkbox"/> |
| 6pts | VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent. | <input type="checkbox"/> |
| 5pts | GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent. | <input type="checkbox"/> |
| 4pts | MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class. | <input type="checkbox"/> |
| 3pts | FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good. | <input checked="" type="checkbox"/> |
| 2pts | POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class. | <input type="checkbox"/> |
| 1pt | POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc. | <input type="checkbox"/> |

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
--	--	--	--

3

Select one or double check adjoining number and average the score.		score
		3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	4
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	3
<input type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	1
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	Other (See User's Manual)	0

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		3
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input checked="" type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		0
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input checked="" type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

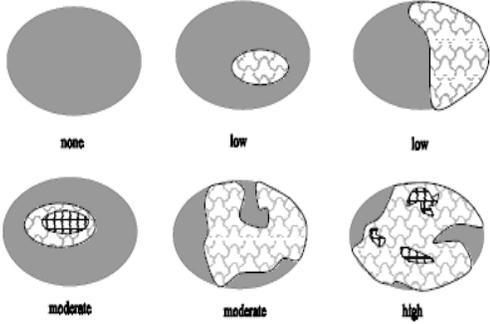


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	7	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	4	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	13	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="checkbox"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.

Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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1	1
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

3	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

18	22
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12pts)
 - Recovered (7pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input type="checkbox"/> Ditch	<input type="checkbox"/> Point source (non-storm water)
<input type="checkbox"/> Tile	<input type="checkbox"/> Filing/grading
<input type="checkbox"/> Dike	<input type="checkbox"/> Road bed/RR track
<input type="checkbox"/> Weir	<input type="checkbox"/> Dredging
<input type="checkbox"/> Storm water input	<input type="checkbox"/> Other

10	32
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- None or none apparent (9pts)
 - Recovered (6pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input checked="" type="checkbox"/> Mowing	<input type="checkbox"/> Shrub/sapling removal
<input type="checkbox"/> Grazing	<input type="checkbox"/> Herbaceous/aquatic bed removal
<input checked="" type="checkbox"/> Clear-cutting	<input type="checkbox"/> Sedimentation
<input checked="" type="checkbox"/> Selective cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Woody debris removal	<input type="checkbox"/> Farming
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Nutrient enrichment

32

Subtotal this page

32

Subtotal first page

-10	22
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3	25
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 2 | Emergent |
| 0 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography

Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

25

GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without “buffers,” or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.		0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland’s buffer zone (if any).		3
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input checked="" type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

4

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		1
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal

Subtotal from previous page

3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

12

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
		12	

Select one or double check adjoining number and average the score.		score
		1
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input checked="" type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

2

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p> <p style="text-align: right;">2</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
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Select one or double check adjoining number and average the score.		score
		2
4pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
3pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
2pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input checked="" type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.		3
7pts	EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts	VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts	GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>
4pts	MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input type="checkbox"/>
3pts	FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input checked="" type="checkbox"/>
2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt	POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input checked="" type="checkbox"/>	Selective cutting	<input type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
--	--	--	--

3

Select one or double check adjoining number and average the score.		score
		3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	2
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
<input type="checkbox"/>	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		3
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input checked="" type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		-1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
	Vegetated hummocks and tussocks.	<input type="checkbox"/>
	Coarse woody debris >15cm (6in) diameter	<input type="checkbox"/>
	Standing dead trees >25cm (10in) diameter at breast height	<input type="checkbox"/>
	Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

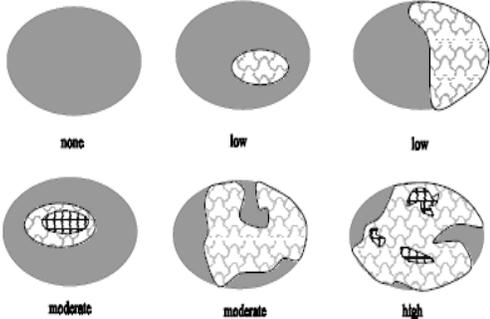


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	3	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	6	
	Metric 5: Special Wetland Communities	-9	
	Metric 6: Plant communities, interspersion, microtopography	7	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	19	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.</p>
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.</p>

Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

4	6
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

13	19
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | | | | | | | | | | | |
|---|---|--------------------------------|---|-------------------------------|---|-------------------------------|--|-------------------------------|-----------------------------------|--|--------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12pts) <input checked="" type="checkbox"/> Recovered (7pts) <input type="checkbox"/> Recovering (3pts) <input type="checkbox"/> Recent or no recovery (1pts) | <p style="text-align: center;">Check all disturbances observed</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> Ditch</td> <td><input type="checkbox"/> Point source (non-storm water)</td> </tr> <tr> <td><input type="checkbox"/> Tile</td> <td><input type="checkbox"/> Filing/grading</td> </tr> <tr> <td><input type="checkbox"/> Dike</td> <td><input type="checkbox"/> Road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> Weir</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Storm water input</td> <td><input type="checkbox"/> Other</td> </tr> </table> | <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | <input type="checkbox"/> Dike | <input type="checkbox"/> Road bed/RR track | <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other |
| <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | | | | | | | | | | |
| <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | | | | | | | | | | |
| <input type="checkbox"/> Dike | <input type="checkbox"/> Road bed/RR track | | | | | | | | | | |
| <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | | | | | | | | | | |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other | | | | | | | | | | |

10	29
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- | | | | | | | | | | | | | | |
|--|--|--|--|----------------------------------|---|---|--|---|-----------------------------------|---|----------------------------------|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9pts) <input type="checkbox"/> Recovered (6pts) <input checked="" type="checkbox"/> Recovering (3pts) <input type="checkbox"/> Recent or no recovery (1pts) | <p style="text-align: center;">Check all disturbances observed</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> Mowing</td> <td><input type="checkbox"/> Shrub/sapling removal</td> </tr> <tr> <td><input type="checkbox"/> Grazing</td> <td><input type="checkbox"/> Herbaceous/aquatic bed removal</td> </tr> <tr> <td><input checked="" type="checkbox"/> Clear-cutting</td> <td><input type="checkbox"/> Sedimentation</td> </tr> <tr> <td><input checked="" type="checkbox"/> Selective cutting</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Woody debris removal</td> <td><input type="checkbox"/> Farming</td> </tr> <tr> <td><input type="checkbox"/> Toxic pollutants</td> <td><input type="checkbox"/> Nutrient enrichment</td> </tr> </table> | <input checked="" type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | <input checked="" type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | <input checked="" type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | <input type="checkbox"/> Woody debris removal | <input type="checkbox"/> Farming | <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment |
| <input checked="" type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | | | | | | | | | | | | |
| <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | | | | | | | | | | | | |
| <input type="checkbox"/> Woody debris removal | <input type="checkbox"/> Farming | | | | | | | | | | | | |
| <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment | | | | | | | | | | | | |

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Subtotal this page

29

Subtotal first page

-10	19
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

4	23
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 3 | Emergent |
| 1 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography

Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15cn (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without “buffers,” or that are located where human land use is more intensive, are often, but not always, more degraded.

	score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	1
7pts WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input checked="" type="checkbox"/>
0pts VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland’s buffer zone (if any).	3
7pts VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input checked="" type="checkbox"/>
1pt HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

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Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		1
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal

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3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

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Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
		12	

Select one or double check adjoining number and average the score.		score
		12
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input checked="" type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

1

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input checked="" type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p> <p style="text-align: right;">1</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
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Select one or double check adjoining number and average the score.	score
4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
3pts RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

<p>4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.</p>	4
7pts EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>
4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input checked="" type="checkbox"/>
3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input type="checkbox"/>
2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input checked="" type="checkbox"/>	Selective cutting	<input type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
--	--	--	--

3

Select one or double check adjoining number and average the score.		score
		3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	2
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
<input type="checkbox"/>	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		-1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
	Vegetated hummocks and tussocks.	<input type="checkbox"/>
	Coarse woody debris >15cm (6in) diameter	<input type="checkbox"/>
	Standing dead trees >25cm (10in) diameter at breast height	<input type="checkbox"/>
	Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

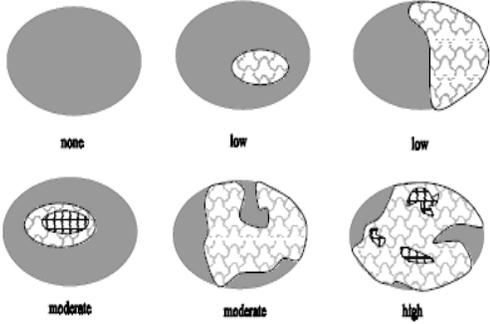


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	18	
	Metric 4: Habitat	9	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	3	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	32	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
<p>Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.
<p>Did you answer "Yes" to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.

Final Category

Choose One <input type="checkbox"/> Category 1 <input checked="" type="checkbox"/> Category 2 <input type="checkbox"/> Category 3

End of Ohio Rapid Assessment Method for Wetlands

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1	1
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

1	2
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

18	20
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | | | | | | | | | | | |
|---|--|--------------------------------|---|-------------------------------|---|-------------------------------|--|-------------------------------|-----------------------------------|--|--------------------------------|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> None or none apparent (12pts) <input type="checkbox"/> Recovered (7pts) <input type="checkbox"/> Recovering (3pts) <input type="checkbox"/> Recent or no recovery (1pts) | <p>Check all disturbances observed</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Ditch</td> <td><input type="checkbox"/> Point source (non-storm water)</td> </tr> <tr> <td><input type="checkbox"/> Tile</td> <td><input type="checkbox"/> Filing/grading</td> </tr> <tr> <td><input type="checkbox"/> Dike</td> <td><input type="checkbox"/> Road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> Weir</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Storm water input</td> <td><input type="checkbox"/> Other</td> </tr> </table> | <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | <input type="checkbox"/> Dike | <input type="checkbox"/> Road bed/RR track | <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other |
| <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | | | | | | | | | | |
| <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | | | | | | | | | | |
| <input type="checkbox"/> Dike | <input type="checkbox"/> Road bed/RR track | | | | | | | | | | |
| <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | | | | | | | | | | |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other | | | | | | | | | | |

9	29
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- | | | | | | | | | | | | | | |
|--|---|---------------------------------|--|----------------------------------|---|--|--|--|-----------------------------------|---|---|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9pts) <input type="checkbox"/> Recovered (6pts) <input type="checkbox"/> Recovering (3pts) <input checked="" type="checkbox"/> Recent or no recovery (1pts) | <p>Check all disturbances observed</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Mowing</td> <td><input type="checkbox"/> Shrub/sapling removal</td> </tr> <tr> <td><input type="checkbox"/> Grazing</td> <td><input type="checkbox"/> Herbaceous/aquatic bed removal</td> </tr> <tr> <td><input type="checkbox"/> Clear-cutting</td> <td><input type="checkbox"/> Sedimentation</td> </tr> <tr> <td><input type="checkbox"/> Selective cutting</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Woody debris removal</td> <td><input checked="" type="checkbox"/> Farming</td> </tr> <tr> <td><input type="checkbox"/> Toxic pollutants</td> <td><input type="checkbox"/> Nutrient enrichment</td> </tr> </table> | <input type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | <input type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | <input type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming | <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment |
| <input type="checkbox"/> Mowing | <input type="checkbox"/> Shrub/sapling removal | | | | | | | | | | | | |
| <input type="checkbox"/> Grazing | <input type="checkbox"/> Herbaceous/aquatic bed removal | | | | | | | | | | | | |
| <input type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation | | | | | | | | | | | | |
| <input type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging | | | | | | | | | | | | |
| <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming | | | | | | | | | | | | |
| <input type="checkbox"/> Toxic pollutants | <input type="checkbox"/> Nutrient enrichment | | | | | | | | | | | | |

29

Subtotal this page

29

Subtotal first page

0	29
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3	32
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent |
| 0 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| 0 | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography

Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.		0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).		1
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

2

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		0
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal

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3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

Check all that are observed present in or near the wetland

<input type="checkbox"/> ditch(es), in or near the wetland	<input type="checkbox"/> point source discharges to the (non-storm water)
<input type="checkbox"/> tile(s), in or near the wetland	<input type="checkbox"/> filling/grading activities in or near the wetland
<input type="checkbox"/> dike(s), in or near the wetland	<input type="checkbox"/> road beds/RR beds in or near the wetland
<input type="checkbox"/> weir(s), in or near the wetland	<input type="checkbox"/> dredging activities in or near the wetland
<input type="checkbox"/> storm water inputs (addition of water)	<input type="checkbox"/> other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?</p>	<p>YES</p> <p>Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 12 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check "none or none apparent" and "recovered" and assign a score of 9.5</p>
	X		

Select one or double check adjoining number and average the score.		score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	12
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO <input checked="" type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
4			

Select one or double check adjoining number and average the score.		score
4pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input checked="" type="checkbox"/>
3pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
2pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.		4
7pts	EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts	VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts	GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>
4pts	MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input type="checkbox"/>
3pts	FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input type="checkbox"/>
2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt	POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/> Mowing	<input type="checkbox"/> Herbaceous layer/aquatic bed removal
<input type="checkbox"/> Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Clear cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Selective cutting	<input checked="" type="checkbox"/> Farming
<input type="checkbox"/> Woody debris removal	<input type="checkbox"/> Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Other (specify)
<input type="checkbox"/> Shrub/sapling removal	<input type="checkbox"/> Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p> <p style="text-align: center;">1</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
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Select one or double check adjoining number and average the score.		score
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input checked="" type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/> Bog (10pts)	<input type="checkbox"/> Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/> Fen (10 pts)	<input type="checkbox"/> Relict wet prairies (10 pts)
<input type="checkbox"/> Old Growth Forest (10 pts)	<input type="checkbox"/> Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/> Mature Forested Wetland (5 pts)	<input type="checkbox"/> Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/> Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/> Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/> Coastal wetlands, restricted hydrology (5 pts)	

Subtotal

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Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	1
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	1
<input type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input checked="" type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

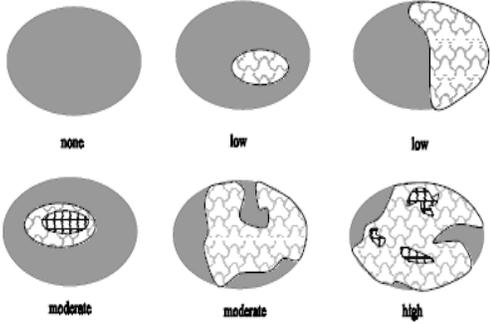


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	3	
	Metric 3: Hydrology	15	
	Metric 4: Habitat	11	
	Metric 5: Special Wetland Communities	-9	
	Metric 6: Plant communities, interspersion, microtopography	11	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	33	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.

Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

2	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

9	13
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12pts)
 - Recovered (7pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input type="checkbox"/> Ditch	<input type="checkbox"/> Point source (non-storm water)
<input checked="" type="checkbox"/> Tile	<input type="checkbox"/> Filing/grading
<input type="checkbox"/> Dike	<input type="checkbox"/> Road bed/RR track
<input type="checkbox"/> Weir	<input type="checkbox"/> Dredging
<input type="checkbox"/> Storm water input	<input type="checkbox"/> Other

8	21
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- None or none apparent (9pts)
 - Recovered (6pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)

Check all disturbances observed	
<input checked="" type="checkbox"/> Mowing	<input checked="" type="checkbox"/> Shrub/sapling removal
<input type="checkbox"/> Grazing	<input type="checkbox"/> Herbaceous/aquatic bed removal
<input checked="" type="checkbox"/> Clear-cutting	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Selective cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Woody debris removal	<input checked="" type="checkbox"/> Farming
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Nutrient enrichment

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Subtotal this page

21

Subtotal first page

-10	11
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

7	18
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- 0 Aquatic Bed
- 3 Emergent
- 1 Shrub
- 0 Forest
- 0 Mudflats
- 0 Open Water
- Other _____

Vegetation Community Cover Scale	
0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality	
low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality	
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography
Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussocks
- 1 Coarse woody debris >15cm (6in)
- 0 Standing dead >25cm (10in) dbh
- 0 Amphibian breeding pools

Micro topography Cover Scale	
0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without “buffers,” or that are located where human land use is more intensive, are often, but not always, more degraded.

	score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	0
7pts WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland’s buffer zone (if any).	1
7pts VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input type="checkbox"/>
3pts MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

3

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		1
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal

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- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input checked="" type="checkbox"/>	point source discharges to the (non-storm water)
<input checked="" type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
	1		

Select one or double check adjoining number and average the score.		score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	7
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

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Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

<p>4a. Substrate/Soil Disturbance. Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.</p> <p>Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.</p>			3.5
<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input checked="" type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
<p>Select one or double check adjoining number and average the score.</p>			score
			3
4pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>	
3pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>	
2pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>	
<p>4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.</p>			
7pts	EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>	
6pts	VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>	
5pts	GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>	
4pts	MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input checked="" type="checkbox"/>	
3pts	FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input type="checkbox"/>	
2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>	
1pt	POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>	

25.5

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
	3		

<p>Select one or double check adjoining number and average the score.</p>			<p>score</p> <p>3</p>
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>	

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a. Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		4
<input type="checkbox"/>	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input checked="" type="checkbox"/>	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	1
<input type="checkbox"/>	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	Other (See User's Manual)	0

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersions. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		-.1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		1
	Vegetated hummocks and tussocks.	<input type="checkbox"/>
	Coarse woody debris >15cm (6in) diameter	<input checked="" type="checkbox"/>
	Standing dead trees >25cm (10in) diameter at breast height	<input type="checkbox"/>
	Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

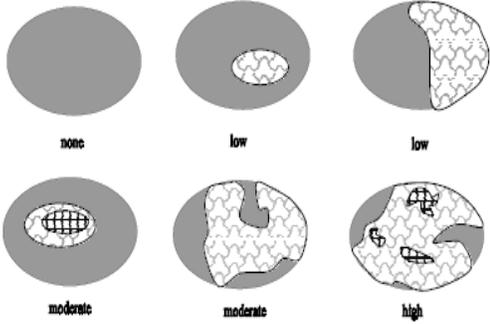


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

ORAM Summary Worksheet

		Circle answer or insert score	Result
Narrative Rating	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	9	
	Metric 3: Hydrology	13	
	Metric 4: Habitat	15	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	1	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	40	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer “Yes” to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.</p>
<p>Did you answer “Yes” to Narrative Rating No. 5</p>	<input type="checkbox"/> YES Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.</p>

Final Category

Choose One	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands

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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6pts)
- 25 to <50acrea (10.1 to <20.2ha) (5pts)
- 10 to <25 acres (4 to <10.1ha) (4pts)
- 3 to <10 acres (1.2 to <4ha) (3pts)
- 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- <0.1 acres (0.04ha) (0pts)

9	11
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
 - NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

13	24
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Metric 3. Hydrology.

Max 30 pts. subtotal

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5pts)
 - Other groundwater (3pts)
 - Precipitation (1pts)
 - Seasonal/Intermittent surface water (3pts)
 - Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1pts)
 - Between stream/lake and other human use (1pts)
 - Part of wetland/upland (e.g. forest), complex (1pts)
 - Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3pts)
 - 0.4 to 0.7m (15.7 to 27.6in) 2pts)
 - <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4pts)
 - Regularly inundate/saturated (3pts)
 - Seasonally inundated (2pts)
 - Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | | | | | | | | | | | |
|---|---|--------------------------------|---|-------------------------------|---|-------------------------------|---|-------------------------------|-----------------------------------|--|--------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12pts) <input checked="" type="checkbox"/> Recovered (7pts) <input type="checkbox"/> Recovering (3pts) <input type="checkbox"/> Recent or no recovery (1pts) | <p>Check all disturbances observed</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Ditch</td> <td><input type="checkbox"/> Point source (non-storm water)</td> </tr> <tr> <td><input type="checkbox"/> Tile</td> <td><input type="checkbox"/> Filing/grading</td> </tr> <tr> <td><input type="checkbox"/> Dike</td> <td><input checked="" type="checkbox"/> Road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> Weir</td> <td><input type="checkbox"/> Dredging</td> </tr> <tr> <td><input type="checkbox"/> Storm water input</td> <td><input type="checkbox"/> Other</td> </tr> </table> | <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | <input type="checkbox"/> Dike | <input checked="" type="checkbox"/> Road bed/RR track | <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other |
| <input type="checkbox"/> Ditch | <input type="checkbox"/> Point source (non-storm water) | | | | | | | | | | |
| <input type="checkbox"/> Tile | <input type="checkbox"/> Filing/grading | | | | | | | | | | |
| <input type="checkbox"/> Dike | <input checked="" type="checkbox"/> Road bed/RR track | | | | | | | | | | |
| <input type="checkbox"/> Weir | <input type="checkbox"/> Dredging | | | | | | | | | | |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other | | | | | | | | | | |

15	39
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Metric 4. Habitat Alteration and Development.

Max 20pts. Subtotal

- 4a. Substrate disturbance. Score one or double-check and average.
- None or none apparent (4pts)
 - Recovered (3pts)
 - Recovered (2pts)
 - Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7pts)
 - Very good (6pts)
 - Good (5pts)
 - Moderately good (4pts)
 - Fair (3pts)
 - Poor to fair (2pts)
 - Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- None or none apparent (9pts)
 - Recovered (6pts)
 - Recovering (3pts)
 - Recent or no recovery (1pts)
- | | |
|--|--|
| <p>Check all disturbances observed</p> <ul style="list-style-type: none"> <input type="checkbox"/> Mowing <input type="checkbox"/> Grazing <input type="checkbox"/> Clear-cutting <input type="checkbox"/> Selective cutting <input type="checkbox"/> Woody debris removal <input type="checkbox"/> Toxic pollutants | <ul style="list-style-type: none"> <input type="checkbox"/> Shrub/sapling removal <input type="checkbox"/> Herbaceous/aquatic bed removal <input type="checkbox"/> Sedimentation <input type="checkbox"/> Dredging <input type="checkbox"/> Farming <input type="checkbox"/> Nutrient enrichment |
|--|--|

39

Subtotal this page

39

Subtotal first page

0	39
Max 10pts	Subtotal

Metric 5. Special wetlands.

Check all that apply and score as indicated

- Bog (10pts)
- Fen (10pts)
- Old growth forest (10pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- Lake Plain Sand Prairies (Oak Openings) (10pts)
- Relict Wet Prairies (10pts)
- Known occurrence state/federal threatened or endangered species (10pts)
- Significant migratory songbird/water fowl habitat or usage (10pts)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

1	40
Max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- | | |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent |
| 0 | Shrub |
| 0 | Forest |
| 0 | Mudflats |
| 0 | Open Water |
| | Other _____ |

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

6b. Horizontal (plan view) Interspersion

Select only one.

- High (5pts)
- Moderately high (4pts)
- Moderate (3pts)
- Moderately low (2pts)
- Low (1pts)
- None (0pts)

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5pts)
- Moderate 25-75% cover (-3pts)
- Sparse 5-25% cover (-1)
- Nearly absent >5% cover (0pts)
- Absent (1pts)

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

6d. Micro topography

Score all present using 0 to 3 scale.

- | | |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks |
| 1 | Coarse woody debris >15cn (6in) |
| 0 | Standing dead >25cm (10in) dbh |
| 0 | Amphibian breeding pools |

Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

40

GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd ²	ft on side	yd on side	ha	m ²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without “buffers,” or that are located where human land use is more intensive, are often, but not always, more degraded.

	score
2a. Average Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	4
7pts WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input checked="" type="checkbox"/>
1pt NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b. Intensity of predominant surround land use(s). Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland’s buffer zone (if any).	5
7pts VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.	<input checked="" type="checkbox"/>
3pts MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

11

Subtotal

Subtotal from previous page

Metric 3. Hydrology Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. Connectivity. Select all that apply and sum score		3
1pt	100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	Between stream/lake and other human land use. This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input checked="" type="checkbox"/>
1pt	Part of riparian or upland corridor. See description above.	<input checked="" type="checkbox"/>
3c. Maximum water depth. Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal

Subtotal from previous page

3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input checked="" type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance. <p style="text-align: right;">7</p>	NO Assign a score of 12 since there are no or no apparent modifications.	NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5
---	--	--	---

Select one or double check adjoining number and average the score.		score
		7
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

<p>Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?</p>	<p>YES <input checked="" type="checkbox"/></p> <p>Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.</p> <p style="text-align: right;">3</p>	<p>NO <input type="checkbox"/></p> <p>Assign a score of 4 since there are no or no apparent modifications.</p>	<p>NOT SURE <input type="checkbox"/></p> <p>Double check "none or none apparent" and "recovered" and assign a score of 3.5</p>
--	--	---	---

Select one or double check adjoining number and average the score.		score
		3
4pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
3pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>
2pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

<p>4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.</p>		3
7pts	EXCELLENT. Wetland appears to represent the best of its type or class.	<input type="checkbox"/>
6pts	VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.	<input type="checkbox"/>
5pts	GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.	<input type="checkbox"/>
4pts	MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.	<input type="checkbox"/>
3pts	FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.	<input checked="" type="checkbox"/>
2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.	<input type="checkbox"/>
1pt	POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.	<input type="checkbox"/>

Subtotal

Subtotal from previous page

4c. **Habitat alteration.** This question evaluates the “intactness” the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to “double check” and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/> Mowing	<input type="checkbox"/> Herbaceous layer/aquatic bed removal
<input type="checkbox"/> Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/> Sedimentation
<input type="checkbox"/> Clear cutting	<input type="checkbox"/> Dredging
<input type="checkbox"/> Selective cutting	<input type="checkbox"/> Farming
<input type="checkbox"/> Woody debris removal	<input type="checkbox"/> Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Other (specify)
<input type="checkbox"/> Shrub/sapling removal	<input type="checkbox"/> Other (specify)

<p>Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be “natural”?</p>	<p>YES</p> <p>Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.</p>	<p>NO</p> <p>Assign a score of 9 since there are no or no apparent modifications.</p>	<p>NOT SURE</p> <p>Double check “none or none apparent” and “recovered” and assign a score of 7.5</p>
			X

Select one or double check adjoining number and average the score.		score
		9
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input checked="" type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>

Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/> Bog (10pts)	<input type="checkbox"/> Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/> Fen (10 pts)	<input type="checkbox"/> Relict wet prairies (10 pts)
<input type="checkbox"/> Old Growth Forest (10 pts)	<input type="checkbox"/> Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/> Mature Forested Wetland (5 pts)	<input type="checkbox"/> Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/> Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/> Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/> Coastal wetlands, restricted hydrology (5 pts)	

Subtotal

Subtotal from previous page

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a. Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		1
<input type="checkbox"/> Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (<i>Lemna</i> spp., <i>spirodelaspp.</i>) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.		0
<input checked="" type="checkbox"/> Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.		1
<input type="checkbox"/> Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.		0
<input type="checkbox"/> Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.		0
<input type="checkbox"/> Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.		0
<input type="checkbox"/> Other (See User's Manual)		

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal

Subtotal from previous page

6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersion	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersion	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersion	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersion	<input type="checkbox"/>

6c. Coverage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.		-3
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input checked="" type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		1
	Vegetated hummocks and tussocks.	<input type="checkbox"/>
	Coarse woody debris >15cm (6in) diameter	<input checked="" type="checkbox"/>
	Standing dead trees >25cm (10in) diameter at breast height	<input type="checkbox"/>
	Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

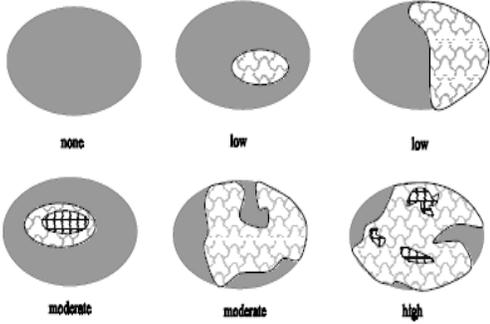


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>

Appendix E

QHEI and HHEI Forms



SITE NAME/LOCATION W. Lancaster-S.Baltimore-W.Millersport
 SITE NUMBER ST-31-PER RIVER BASIN _____ DRAINAGE AREA (mi²) 0.37
 LENGTH OF STREAM REACH (ft) 200 LAT. 39.89130 LONG. -82.56970 RIVER CODE _____ RIVER MILE 1.14
 DATE 03/27/24 SCORER Nathan Barry COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BDR SLABS [16 pts]	<u>0%</u>	<input checked="" type="checkbox"/> SILT [3 pt]	<u>55%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>0%</u>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>40%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>0%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>5%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0.00% (A) Substrains Percentage 100% (B)
 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 3

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input checked="" type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 45

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> < 1.0 m (<= 3' 3") [5 pts]
<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 3.00

HHEI Metric Points

Substrate Max = 40
6
A + B

Pool Depth Max = 30
20

Bankfull Width Max=30
20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)			
Wide >10m		Mature Forest, Wetland		<input type="checkbox"/>	<input type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Narrow <5m		Residential, Park, New Field			
None		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Fenced Pasture			
				<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: _____ Distance from Evaluated Stream
 CWH Name: _____ Distance from Evaluated Stream
 EWH Name: _____ Distance from Evaluated Stream

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order

County: Fairfield Township / City: Baltimore

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 03/26/24 Quantity: 0.30

Photograph Information: _____

Elevated Turbidity? (Y/N): Y Canopy (% open): 100%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: N/A

Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)

Is the sampling reach representative of the stream (Y/N): Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

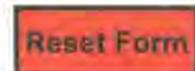
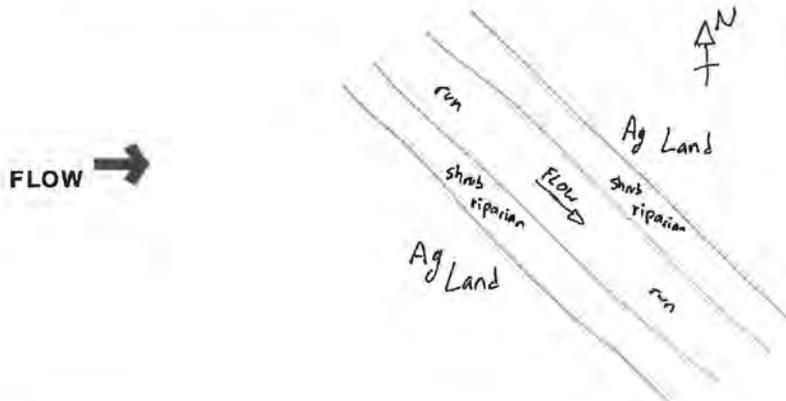
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport

RM: V3 Companies - Nathan Barnett Date: 3/27/24

ST-25-PER

Scorers Full Name & Affiliation:

River Code: STORET #: Lat./ Long.: 39.87185 182.57663 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Substrate assessment grid with categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, SAND, BEDROCK, etc. and a score box for 7.

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

Instream Cover assessment grid with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes a score box for 3.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

Channel Morphology assessment grid with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE. Includes a score box for 10.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

Bank Erosion and Riparian Zone assessment grid with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes checkboxes for NONE, MODERATE, HEAVY, etc. Includes a score box for 4.

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment grid with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes checkboxes for depth and velocity. Includes a score box for 6.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Riffle / Run Quality assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes for riffle depth and substrate. Includes a score box for 2.

6) GRADIENT (39 ft/mi) DRAINAGE AREA (1.2 mi^2) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]

Gradient assessment grid with categories: %POOL, %GLIDE, %RUN, %RIFFLE. Includes a score box for 8.

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st -sample pass- 2nd
- HIGH
- UP
- NORMAL
- LOW
- DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
- 20-<40 cm
- 40-70 cm
- > 70 cm/ CTB
- SECCHI DEPTH

CANOPY

- > 85%- OPEN
- 55%-<85%
- 30%-<55%
- 10%-<30%
- <10%- CLOSED

- 1st _____ cm
- 2nd _____ cm

C) RECREATION

- AREA DEPTH
- POOL: >100ft² >3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations. Concerns, Access directions, etc.

B) AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

D) MAINTENANCE

- PUBLIC ~~PRIVATE~~ BOTH / NA
- ACTIVE ~~HISTORIC~~ BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- MOVING-BEDLOAD STABLE
- ARMoured / SLUMPS
- ISLANDS / SCoured
- IMPOUNDED / DESICCATED
- FLOOD CONTROL DRAINAGE

Circle some & COMMENT

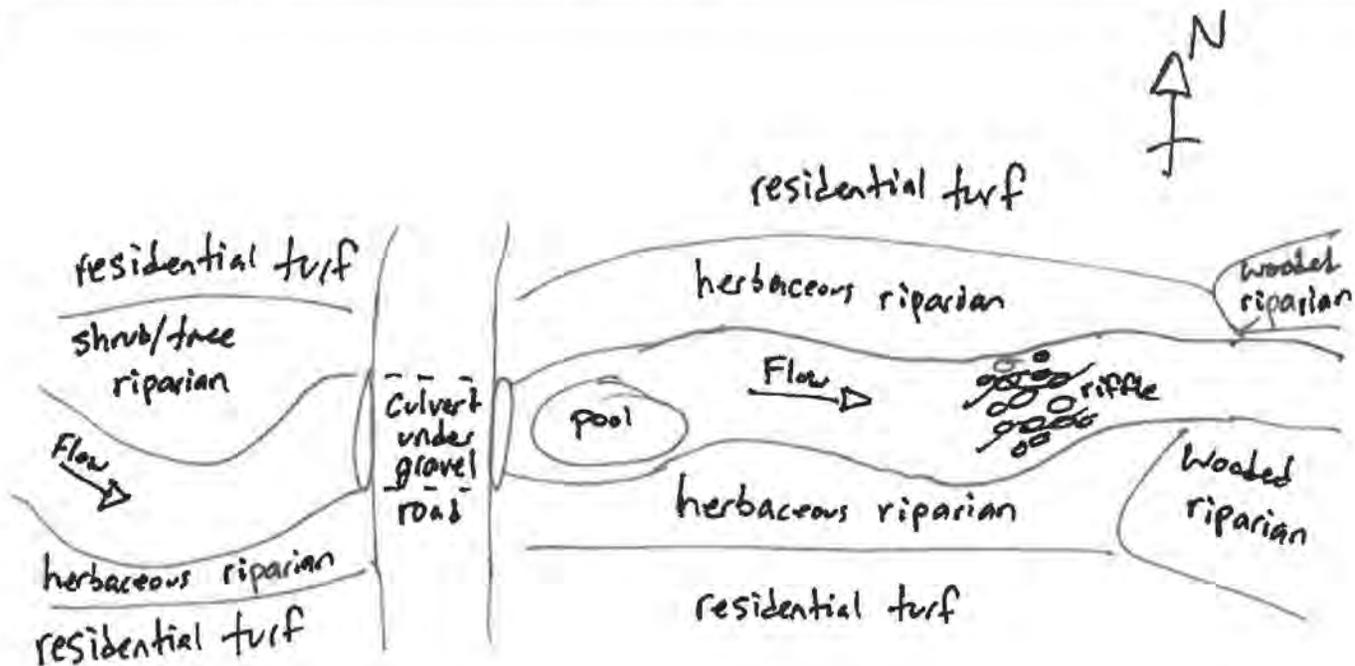
E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF LAWN HOME
- ATMOSPHERE / DATA PAUCITY

F) MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio
- Legacy Tree:

Stream Drawing:



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport

RM: _____ **Date:** 3/ 27/ 24

ST-15-PER

Scorers Full Name & Affiliation: V3 Companies - Nathan Barnett

River Code: - - - **STORET #:** _____ **Lat./ Long.:** 39 . 85415 / 82 . 58457

Office verified location

1] SUBSTRATE Check **ONLY** Two substrate **TYPE BOXES**; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES	POOL RIFFLE	OTHER TYPES	POOL RIFFLE	ORIGIN	QUALITY
<input type="checkbox"/> BLDR /SLABS [10]	_____	<input checked="" type="checkbox"/> HARDPAN [4]	40	<input type="checkbox"/> LIMESTONE [1]	<input checked="" type="checkbox"/> HEAVY [-2]
<input type="checkbox"/> BOULDER [9]	_____	<input type="checkbox"/> DETRITUS [3]	_____	<input checked="" type="checkbox"/> TILLS [1]	<input type="checkbox"/> MODERATE [-1]
<input type="checkbox"/> COBBLE [8]	_____	<input type="checkbox"/> MUCK [2]	_____	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/> NORMAL [0]
<input type="checkbox"/> GRAVEL [7]	_____	<input checked="" type="checkbox"/> SILT [2]	50	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/> FREE [1]
<input type="checkbox"/> SAND [6]	10	<input type="checkbox"/> ARTIFICIAL [0]	_____	<input type="checkbox"/> SANDSTONE [0]	<input checked="" type="checkbox"/> EXTENSIVE [-2]
<input type="checkbox"/> BEDROCK [5]	_____			<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/> MODERATE [-1]
				<input type="checkbox"/> LACUSTURINE [0]	<input type="checkbox"/> NORMAL [0]
				<input type="checkbox"/> SHALE [-1]	<input type="checkbox"/> NONE [1]
				<input type="checkbox"/> COAL FINES [-2]	

NUMBER OF BEST TYPES: 4 or more [2] 3 or less [0]

Comments

Substrate
3
Maximum
20

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT
Check ONE (Or 2 & average)

<input type="checkbox"/> UNDERCUT BANKS [1]	<input type="checkbox"/> POOLS > 70cm [2]	<input type="checkbox"/> OXBOWS, BACKWATERS [1]
<input type="checkbox"/> OVERHANGING VEGETATION [1]	<input type="checkbox"/> ROOTWADS [1]	<input type="checkbox"/> AQUATIC MACROPHYTES [1]
<input type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]	<input type="checkbox"/> BOULDERS [1]	<input type="checkbox"/> LOGS OR WOODY DEBRIS [1]
<input type="checkbox"/> ROOTMATS [1]		

Cover
Maximum
20
9

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input type="checkbox"/> MODERATE [3]	<input type="checkbox"/> GOOD [5]	<input type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input checked="" type="checkbox"/> LOW [2]	<input checked="" type="checkbox"/> FAIR [3]	<input checked="" type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Channel
Maximum
20
10

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for **EACH BANK** (Or 2 per bank & average)

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY	CONSERVATION TILLAGE
<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/> URBAN OR INDUSTRIAL [0]
<input checked="" type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input type="checkbox"/> MINING / CONSTRUCTION [0]
<input type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	
	<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]	
	<input type="checkbox"/> NONE [0]	<input checked="" type="checkbox"/> OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s)
past 100m riparian.
Riparian
Maximum
10
3

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply
<input type="checkbox"/> > 1m [6]	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> TORRENTIAL [-1]
<input type="checkbox"/> 0.7-<1m [4]	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> SLOW [1]
<input checked="" type="checkbox"/> 0.4-<0.7m [2]	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input type="checkbox"/> VERY FAST [1]
<input type="checkbox"/> 0.2-<0.4m [1]		<input type="checkbox"/> FAST [1]
<input type="checkbox"/> < 0.2m [0]		<input type="checkbox"/> INTERMITTENT [-1]
		<input checked="" type="checkbox"/> MODERATE [1]
		<input type="checkbox"/> EDDIES [1]

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Pool /
Current
Maximum
12
5

Comments

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input checked="" type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input type="checkbox"/> MODERATE [0]

Riffle /
Run
Maximum
8
0

Comments No riffles in sampled reach

6] GRADIENT (ft/mi) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]

DRAINAGE AREA (4.43 mi²)

%POOL: 30 **%GLIDE:** 0

%RUN: 70 **%RIFFLE:** 0

Gradient
Maximum
10
3

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st -sample pass- 2nd
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
 - 20-<40 cm
 - 40-70 cm
 - > 70 cm/ CTB
 - SECCHI DEPTH

CANOPY

- 1st pass _____ cm
- 2nd pass _____ cm
- > 85%- OPEN
 - 55%-<85%
 - 30%-<55%
 - 10%-<30%
 - <10%- CLOSED

C) RECREATION

- AREA DEPTH
- POOL: >100ft² >3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

B) AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

D) MAINTENANCE

- PUBLIC / PRIVATE / BOTH / NA
- ACTIVE / HISTORIC / BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- MOVING-BEDLOAD-STABLE
- ARMORED / SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

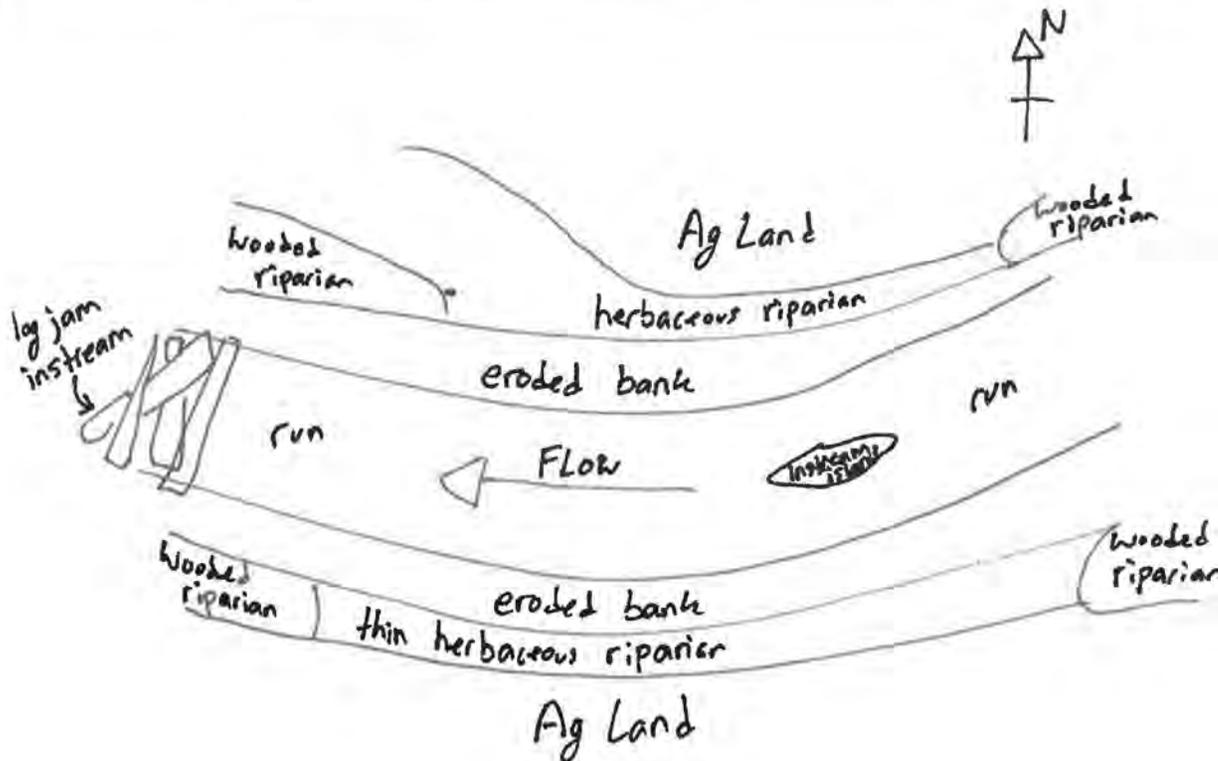
E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

F) MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio
- Legacy Tree:

Stream Drawing:



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport

RM: _____ Date: 3 / 28 / 24

Walnut Creek

Scorers Full Name & Affiliation: V3 Companies - Emily Holt

River Code: - - - STORET #: _____ Lat./ Long.: 39 . 7020 182 . 6401 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		POOL RIFFLE	OTHER TYPES		POOL RIFFLE	ORIGIN		QUALITY	
<input type="checkbox"/> BLDR /SLABS [10]	_____	_____	<input type="checkbox"/> HARDPAN [4]	_____	_____	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/> HEAVY [-2]	<input type="checkbox"/> MODERATE [-1]	16
<input type="checkbox"/> BOULDER [9]	_____	_____	<input type="checkbox"/> DETRITUS [3]	_____	_____	<input checked="" type="checkbox"/> TILLS [1]	<input checked="" type="checkbox"/> NORMAL [0]	<input type="checkbox"/> EXTENSIVE [-2]	
<input checked="" type="checkbox"/> COBBLE [8]	_____	50	<input type="checkbox"/> MUCK [2]	_____	_____	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/> FREE [1]	<input type="checkbox"/> MODERATE [-1]	
<input type="checkbox"/> GRAVEL [7]	_____	50	<input type="checkbox"/> SILT [2]	_____	_____	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/> EXTENSIVE [-2]	<input type="checkbox"/> MODERATE [-1]	
<input type="checkbox"/> SAND [6]	_____	_____	<input type="checkbox"/> ARTIFICIAL [0]	_____	_____	<input type="checkbox"/> SANDSTONE [0]	<input checked="" type="checkbox"/> NORMAL [0]	<input type="checkbox"/> NONE [1]	
<input type="checkbox"/> BEDROCK [5]	_____	_____	(Score natural substrates; ignore sludge from point-sources)			<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/> LACUSTURINE [0]	<input type="checkbox"/> NONE [1]	Substrate Maximum 20
NUMBER OF BEST TYPES:		<input type="checkbox"/> 4 or more [2]		<input checked="" type="checkbox"/> 3 or less [0]		<input type="checkbox"/> SHALE [-1]	<input type="checkbox"/> COAL FINES [-2]		

Comments

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

<input type="checkbox"/> UNDERCUT BANKS [1]	<input type="checkbox"/> POOLS > 70cm [2]	<input type="checkbox"/> OXBOWS, BACKWATERS [1]	<input checked="" type="checkbox"/> MODERATE 25-75% [7]
<input type="checkbox"/> OVERHANGING VEGETATION [1]	<input type="checkbox"/> ROOTWADS [1]	<input type="checkbox"/> AQUATIC MACROPHYTES [1]	<input type="checkbox"/> SPARSE 5-<25% [3]
<input type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]	<input type="checkbox"/> BOULDERS [1]	<input type="checkbox"/> LOGS OR WOODY DEBRIS [1]	<input type="checkbox"/> NEARLY ABSENT <5% [1]
<input type="checkbox"/> ROOTMATS [1]			

Cover
Maximum
20

Comments

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input checked="" type="checkbox"/> MODERATE [3]	<input checked="" type="checkbox"/> GOOD [5]	<input checked="" type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input type="checkbox"/> LOW [2]	<input type="checkbox"/> FAIR [3]	<input type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Channel
Maximum
20

Comments

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream		RIPARIAN WIDTH	FLOOD PLAIN QUALITY	
EROSION	<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/> CONSERVATION TILLAGE [1]
<input type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input checked="" type="checkbox"/> URBAN OR INDUSTRIAL [0]
<input checked="" type="checkbox"/> HEAVY / SEVERE [1]	<input checked="" type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	<input type="checkbox"/> MINING / CONSTRUCTION [0]
		<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]	
		<input type="checkbox"/> NONE [0]	<input checked="" type="checkbox"/> OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.
Riparian
Maximum
10

Comments

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY	Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply	
<input type="checkbox"/> > 1m [6]	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> TORRENTIAL [-1]	
<input checked="" type="checkbox"/> 0.7-<1m [4]	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> SLOW [1]	
<input type="checkbox"/> 0.4-<0.7m [2]	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input checked="" type="checkbox"/> VERY FAST [1]	
<input type="checkbox"/> 0.2-<0.4m [1]		<input type="checkbox"/> INTERSTITIAL [-1]	
<input type="checkbox"/> < 0.2m [0]		<input checked="" type="checkbox"/> FAST [1]	
		<input type="checkbox"/> INTERMITTENT [-2]	
		<input type="checkbox"/> MODERATE [1]	
		<input type="checkbox"/> EDDIES [1]	

Indicate for reach - pools and riffles.
Pool / Current
Maximum
12

Comments

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input checked="" type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input checked="" type="checkbox"/> LOW [1]
<input checked="" type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input type="checkbox"/> MODERATE [0]
			<input type="checkbox"/> EXTENSIVE [-1]

Riffle / Run
Maximum
8

Comments

6) GRADIENT (ft/mi)	<input type="checkbox"/> VERY LOW - LOW [2-4]	%POOL: 0	%GLIDE: 0	8
DRAINAGE AREA	(39.8 mi ²)	<input type="checkbox"/> MODERATE [6-10]	%RUN: 60	%RIFFLE: 40	
		<input checked="" type="checkbox"/> HIGH - VERY HIGH [10-6]			Gradient Maximum 10

AJ SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st-sample pass- 2nd
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
 - 20-<40 cm
 - 40-70 cm
 - > 70 cm/ CTB
 - SECCHI DEPTH

meters

CANOPY

- 1st pass _____ cm
- 2nd pass _____ cm
- > 85%- OPEN
 - 55%-<85%
 - 30%-<55%
 - 10%-<30%
 - <10%- CLOSED

CJ RECREATION

- AREA DEPTH
- POOL: >100ft² >3ft

BJ AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

DJ MAINTENANCE

- PUBLIC / ~~PRIVATE~~ / BOTH / NA
- ACTIVE / ~~HISTORIC~~ / BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- ~~MOVING~~ BEDLOAD-STABLE
- ARMOURED / SLUMPS
- ISLANDS / SCoured
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

EJ ISSUES

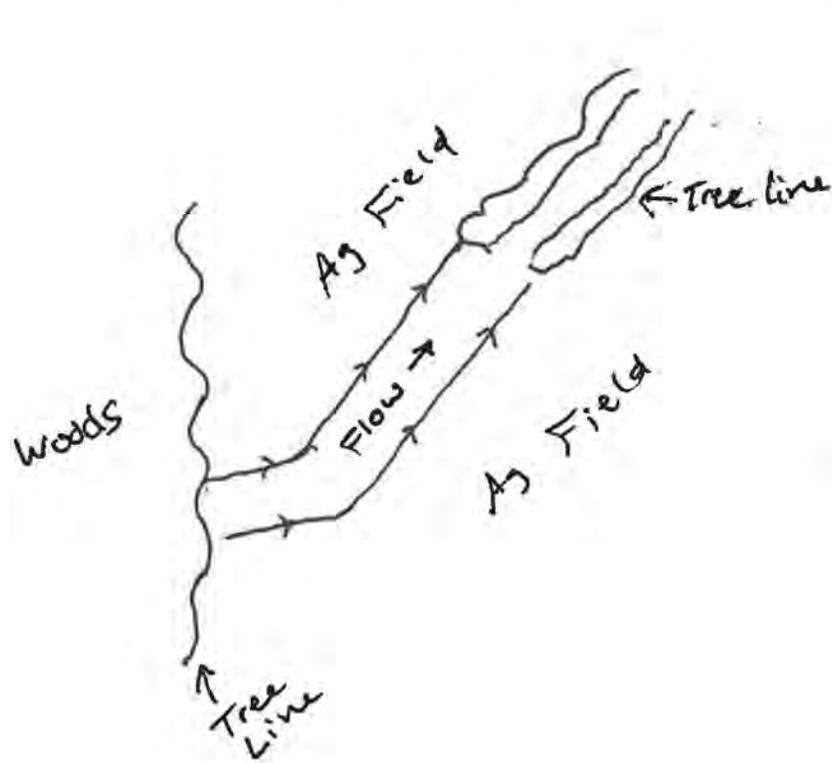
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / ~~EROSION~~ / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

FJ MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio
- Legacy Tree:

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream Drawing:



HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport
 SITE NUMBER ST-2-PER RIVER BASIN _____ DRAINAGE AREA (mi²) 0.53
 LENGTH OF STREAM REACH (ft) 75 LAT. 39.82879 LONG. -82.59313 RIVER CODE _____ RIVER MILE _____
 DATE 03/27/24 SCORER E.Holt COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	0%	<input checked="" type="checkbox"/> SILT [3 pt]	100%
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	0%
<input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	0%	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	0%
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	0%	<input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> SAND (<2 mm) [6 pts]	0%	<input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0.00% (A) 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 1

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input checked="" type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters):**

HHEI Metric Points

Substrate Max = 40

4

A + B

Pool Depth Max = 30

20

Bankfull Width Max=30

30

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wide >10m		Mature Forest, Wetland		Conservation Tillage	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Urban or Industrial	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None		Fenced Pasture		Mining or Construction	

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input checked="" type="checkbox"/> Flat (0.5 ft/100 ft)	<input type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
--	---	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order

County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity:

Photograph Information:

Elevated Turbidity? (Y/N): N Canopy (% open):

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:

Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)

Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

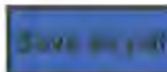
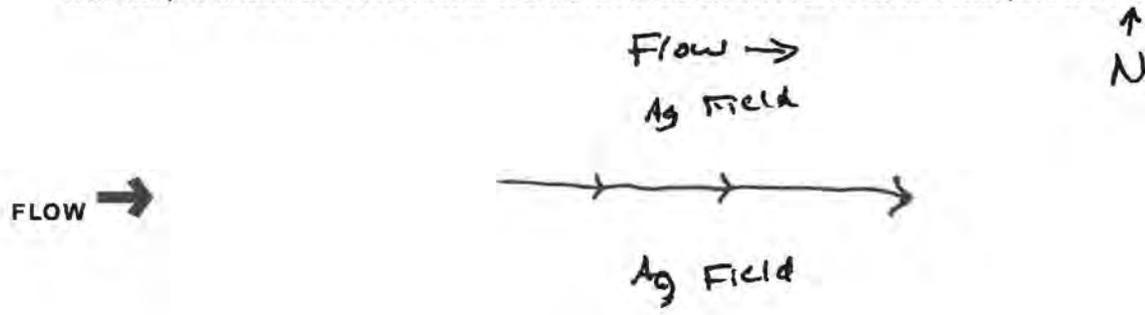
Fish Observed? (Y/N) Y Voucher? (Y/N) Y Salamanders Observed? (Y/N) Y Voucher? (Y/N) Y

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) Y Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) Y

Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-68-INT** RIVER BASIN **Walnut Creek** DRAINAGE AREA (mi²) **0.38**

LENGTH OF STREAM REACH (ft) **210** LAT. **39.82183** LONG. **-82.59785** RIVER CODE **EPH** RIVER MILE **N/A**

DATE **03/27/24** SCORER **L. Vine** COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input checked="" type="checkbox"/> SILT [3 pt]	<input type="checkbox"/> 30%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="checkbox"/> 10%	<input checked="" type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="checkbox"/> 40%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="checkbox"/> 20%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="checkbox"/> 0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **10.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **3**

TOTAL NUMBER OF SUBSTRATE TYPES: **4**

HHEI Metric Points

Substrate Max = 40

7

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **20**

Pool Depth Max = 30

30

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **2.00**

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R		
<input type="checkbox"/>	<input type="checkbox"/> (Per Bank)	<input type="checkbox"/>	<input type="checkbox"/> (Most Predominant per Bank)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Wide >10m	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	Moderate 5-10m	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	Open Pasture, Row Crop
<input checked="" type="checkbox"/>	None	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input checked="" type="checkbox"/> WWH Name: Walnut Creek	Distance from Evaluated Stream	0.69
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Baltimore** NRCS Soil Map Page: NRCS Soil Map Stream Order
County: **Fairfield** Township / City: **Baltimore**

MISCELLANEOUS

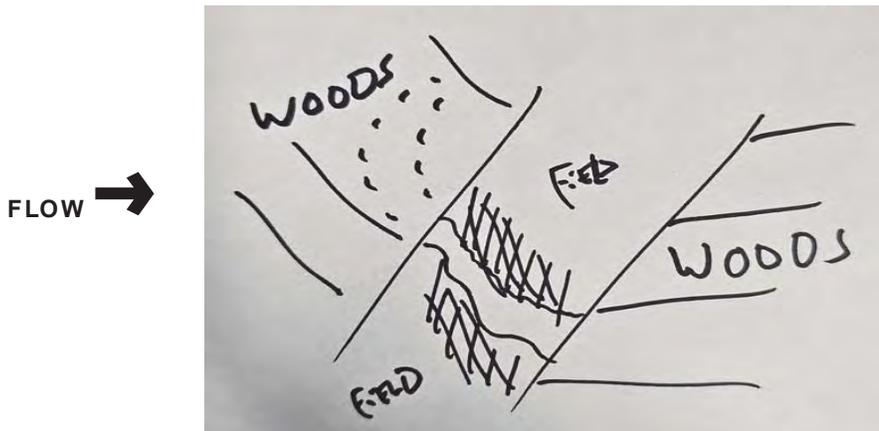
Base Flow Conditions? (Y/N): Y Date of last precipitation: **03/26/24** Quantity: **0.03**
Photograph Information:
Elevated Turbidity? (Y/N): Y Canopy (% open): **100%**
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Primary Headwater Habitat Evaluation Form

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HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-63-INT** RIVER BASIN **Walnut Creek** DRAINAGE AREA (mi²) **0.00**

LENGTH OF STREAM REACH (ft) **153** LAT. **39.81450** LONG. **-82.60525** RIVER CODE **EPH** RIVER MILE **N/A**

DATE **03/27/24** SCORER **L. Vine** COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> SILT [3 pt]	<input type="text" value="100%"/>
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**

TOTAL NUMBER OF SUBSTRATE TYPES: **1**

HHEI Metric Points

Substrate Max = 40

7

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **20**

Pool Depth Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **2.00**

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)	
Wide >10m		Mature Forest, Wetland	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>
Moderate 5-10m		Residential, Park, New Field	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>
Narrow <5m		Conservation Tillage	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Urban or Industrial	<input type="checkbox"/>
None		Open Pasture, Row Crop	<input type="checkbox"/>
		Mining or Construction	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input checked="" type="checkbox"/> WWH Name: Walnut Creek	Distance from Evaluated Stream	0.69
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Baltimore** NRCS Soil Map Page: NRCS Soil Map Stream Order
County: **Fairfield** Township / City: **Baltimore**

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: **03/26/24** Quantity: **0.03**
Photograph Information:
Elevated Turbidity? (Y/N): Y Canopy (% open): **100%**
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport
 SITE NUMBER ST-55-INT RIVER BASIN _____ DRAINAGE AREA (mi²) 0.24
 LENGTH OF STREAM REACH (ft) 145 LAT. 39.80056 LONG. -82.61736 RIVER CODE _____ RIVER MILE _____
 DATE 03/27/24 SCORER Nathan Barr COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> Bldr Slabs [16 pts]	0%	<input type="checkbox"/> Silt [3 pt]	0%
<input type="checkbox"/> Boulder (>256 mm) [16 pts]	0%	<input type="checkbox"/> Leaf Pack/Woody Debris [3 pts]	0%
<input type="checkbox"/> Bedrock [16 pt]	0%	<input type="checkbox"/> Fine Detritus [3 pts]	0%
<input type="checkbox"/> Cobble (65-256 mm) [12 pts]	5%	<input checked="" type="checkbox"/> Clay or Hardpan [0 pt]	60%
<input type="checkbox"/> Gravel (2-64 mm) [9 pts]	15%	<input type="checkbox"/> Muck [0 pts]	0%
<input checked="" type="checkbox"/> Sand (<2 mm) [6 pts]	20%	<input type="checkbox"/> Artificial [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5.00% (A) Substrate Percentage Chosen 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 6.67

HHEI Metric Points

Substrate Max = 40

10

A + B

Pool Depth Max = 30

25

Bankfull Width Max=30

30

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank) Wide >10m		Mature Forest, Wetland		Conservation Tillage	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Urban or Industrial	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None		Fenced Pasture		Mining or Construction	

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5
		<input type="checkbox"/> 3.0
		<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 ft/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
---	--	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order:
 County: Fairfield Township / City: Lancaster

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 03/26/24 Quantity: 0.30
 Photograph Information:
 Elevated Turbidity? (Y/N): N Canopy (% open): 0%
 Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: N/A
 Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
 Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

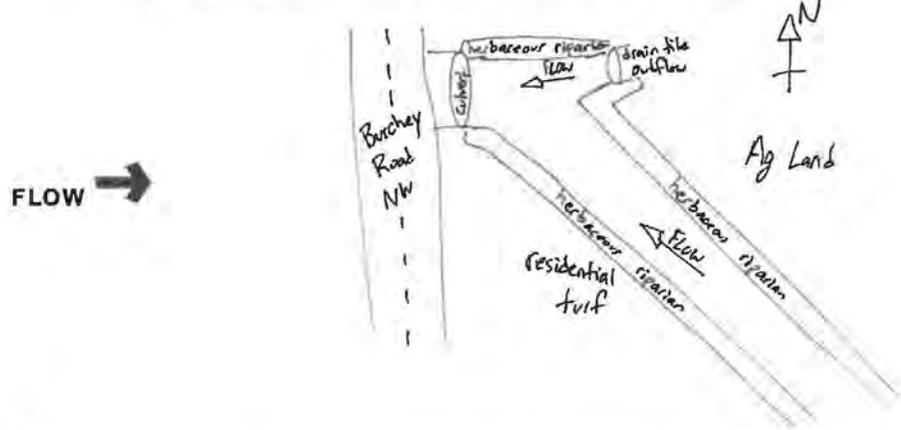
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
 Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
 Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
 Comments Regarding Biology: Not assessed

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport

SITE NUMBER ST-53-INT RIVER BASIN _____ DRAINAGE AREA (mi²) 0.30

LENGTH OF STREAM REACH (ft) 170 LAT. 39.79897 LONG. -82.61860 RIVER CODE _____ RIVER MILE _____

DATE 03/27/24 SCORER Nathan Barr COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	0%	<input type="checkbox"/> SILT [3 pt]	0%
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	0%
<input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input checked="" type="checkbox"/> COBBLE (65-256 mm) [12 pts]	30%	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	0%
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	40%	<input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> SAND (<2 mm) [6 pts]	30%	<input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **30.00%** (A) Substrate Percentages Check: **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES: 3**

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts] <input type="checkbox"/> > 22.5 - 30 cm [30 pts] <input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts] <input type="checkbox"/> < 5 cm [5 pts] <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]
---	---

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters): 15**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts] <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] <input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
---	---

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters): 5.00**

HHEI Metric Points

Substrate Max = 40

24

A + B

Pool Depth Max = 30

25

Bankfull Width Max=30

30

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/> (Per Bank) Wide >10m	<input type="checkbox"/>	<input type="checkbox"/> Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/> Moderate 5-10m	<input type="checkbox"/>	<input type="checkbox"/> Immature Forest, Shrub or Old Field
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Narrow <5m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/> Fenced Pasture
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Mining or Construction

COMMENTS: _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) <input type="checkbox"/> Dry channel, no water (Ephemeral)
---	--

COMMENTS: _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 ft/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
---	--	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
 County: Fairfield Township / City: Lancaster

MISCELLANEOUS

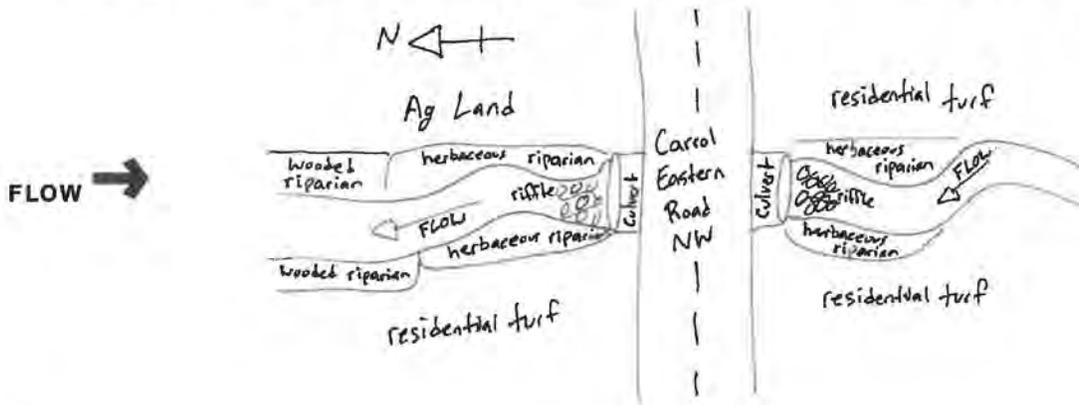
Base Flow Conditions? (Y/N): Y Date of last precipitation: 03/26/24 Quantity: 0.30
 Photograph Information:
 Elevated Turbidity? (Y/N): N Canopy (% open): 100%
 Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: N/A
 Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
 Is the sampling reach representative of the stream (Y/N) Y If not, please explain:
 Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
 Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
 Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
 Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport
 SITE NUMBER ST-48-EPH RIVER BASIN _____ DRAINAGE AREA (mi²) 0.27
 LENGTH OF STREAM REACH (ft) 115 LAT. 39.78862 LONG. -82.62272 RIVER CODE _____ RIVER MILE _____
 DATE 03/27/24 SCORER Nathan Barr COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input checked="" type="checkbox"/> SILT [3 pt]	<u>35%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>5%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>10%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>0%</u>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>50%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>0%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>0%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0.00% (A) Substrate Percentages Check 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (<= 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 0.33

HHEI Metric Points

Substrate Max = 40

7
A + B

Pool Depth Max = 30

25

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)		Conservation Tillage	
Wide >10m		Mature Forest, Wetland		Urban or Industrial	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open Pasture, Row Crop	
Moderate 5-10m		Immature Forest, Shrub or Old Field		Mining or Construction	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Narrow <5m		Residential, Park, New Field			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
None		Fenced Pasture			

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 ft/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
---	--	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Fairfield Township / City: Lancaster

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 03/26/24 Quantity: 0.30

Photograph Information:

Elevated Turbidity? (Y/N): N Canopy (% open): 100%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: N/A

Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)

Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

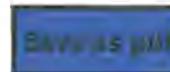
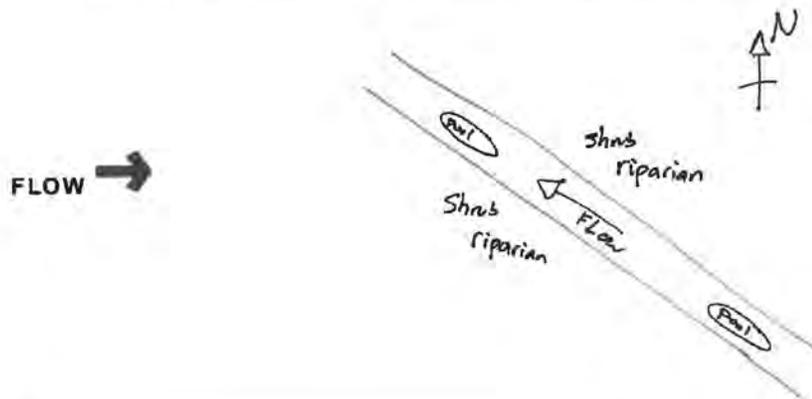
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology:

No biotic evaluation conducted

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport

SITE NUMBER ST-44-INT RIVER BASIN _____ DRAINAGE AREA (mi²) 0.15

LENGTH OF STREAM REACH (ft) 100 LAT. 39.78067 LONG. -82.62624 RIVER CODE _____ RIVER MILE _____

DATE 03/27/24 SCORER Nathan Barr COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BDR SLABS [16 pts]	0%	<input type="checkbox"/> SILT [3 pt]	10%
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	0%
<input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input checked="" type="checkbox"/> COBBLE (65-256 mm) [12 pts]	30%	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	0%
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	30%	<input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> SAND (<2 mm) [6 pts]	30%	<input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **30.00%** (A) (B) 100%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 **TOTAL NUMBER OF SUBSTRATE TYPES: 4**

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters): 8**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters): 1.20**

HHEI Metric Points

Substrate
Max = 40

25

A + B

Pool Depth
Max = 30

15

Bankfull
Width
Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wide >10m		Mature Forest, Wetland		Conservation Tillage	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Urban or Industrial	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None		Fenced Pasture		Mining or Construction	

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input checked="" type="checkbox"/> Flat (0.5 ft/100 ft)	<input type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
--	---	---	---	--

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Distance from Evaluated Stream
 CWH Name: Distance from Evaluated Stream
 EWH Name: Distance from Evaluated Stream

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
 County: Fairfield Township / City: Lancaster

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 03/26/24 Quantity: 0.30
 Photograph Information:
 Elevated Turbidity? (Y/N): N Canopy (% open): 90%
 Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: N/A
 Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
 Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

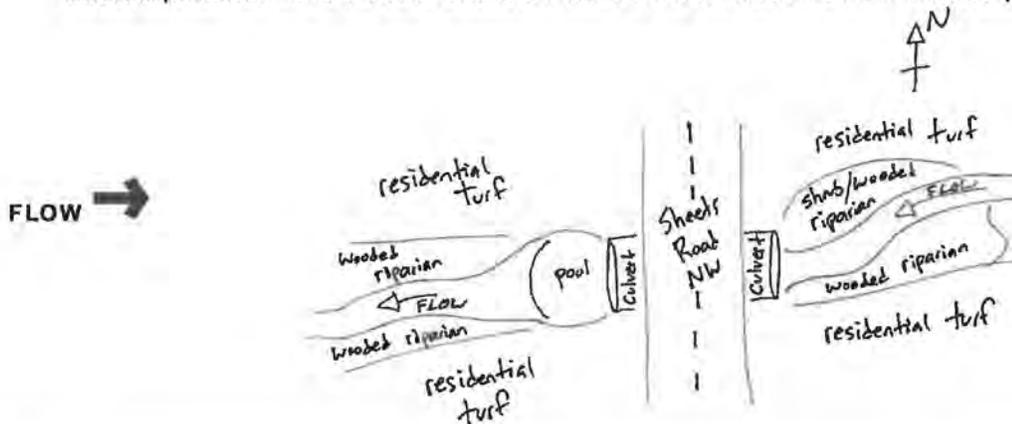
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
 Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
 Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
 Comments Regarding Biology:
No biotic evaluation conducted

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Primary Headwater Habitat Evaluation Form

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HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-44-EPH** RIVER BASIN **Hocking** DRAINAGE AREA (mi²) **0.32**

LENGTH OF STREAM REACH (ft) **221** LAT. **39.77551** LONG. **-82.62766** RIVER CODE **EPH** RIVER MILE **N/A**

DATE **03/27/24** SCORER **L. Vine** COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> SILT [3 pt]	<input type="text" value="100%"/>
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**

TOTAL NUMBER OF SUBSTRATE TYPES: **1**

HHEI Metric Points

Substrate Max = 40

7

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **20**

Pool Depth Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **2.00**

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)	
Wide >10m		Mature Forest, Wetland	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>
Moderate 5-10m		Residential, Park, New Field	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>
Narrow <5m		Conservation Tillage	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Urban or Industrial	<input type="checkbox"/>
None		Open Pasture, Row Crop	<input type="checkbox"/>
		Mining or Construction	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input checked="" type="checkbox"/> WWH Name:	Hocking River	Distance from Evaluated Stream	2.50
<input type="checkbox"/> CWH Name:		Distance from Evaluated Stream	
<input type="checkbox"/> EWH Name:		Distance from Evaluated Stream	

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

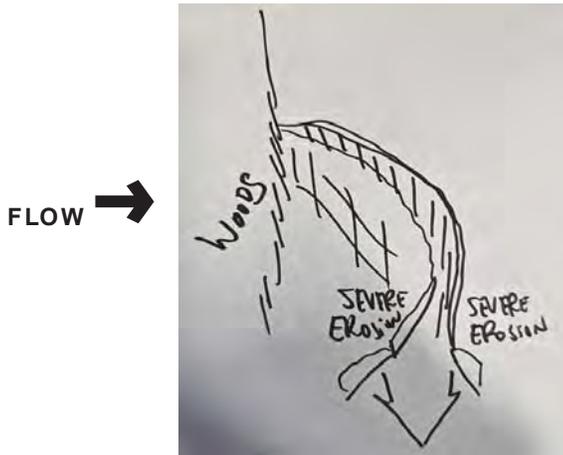
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Primary Headwater Habitat Evaluation Form

63

HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-42-INT** RIVER BASIN **Hocking** DRAINAGE AREA (mi²) **0.68**

LENGTH OF STREAM REACH (ft) **241** LAT. **39.77506** LONG. **-82.62789** RIVER CODE **INT** RIVER MILE **<1**

DATE **03/27/24** SCORER **L. Vine** COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> SILT [3 pt]	<input type="checkbox"/> 30%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="checkbox"/> 40%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="checkbox"/> 0%
<input checked="" type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="checkbox"/> 30%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="checkbox"/> 0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **15**

TOTAL NUMBER OF SUBSTRATE TYPES: **3**

HHEI Metric Points

Substrate Max = 40

18

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **20**

Pool Depth Max = 30

25

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **2.00**

Bankfull Width Max=30

20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)	
Wide >10m		Mature Forest, Wetland	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>
Moderate 5-10m		Residential, Park, New Field	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>
Narrow <5m		Conservation Tillage	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial	<input type="checkbox"/>
None		Open Pasture, Row Crop	<input type="checkbox"/>
COMMENTS _____		Mining or Construction	<input type="checkbox"/>

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)
COMMENTS _____	

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input checked="" type="checkbox"/> WWH Name:	Hocking River	Distance from Evaluated Stream	2.50
<input type="checkbox"/> CWH Name:		Distance from Evaluated Stream	
<input type="checkbox"/> EWH Name:		Distance from Evaluated Stream	

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

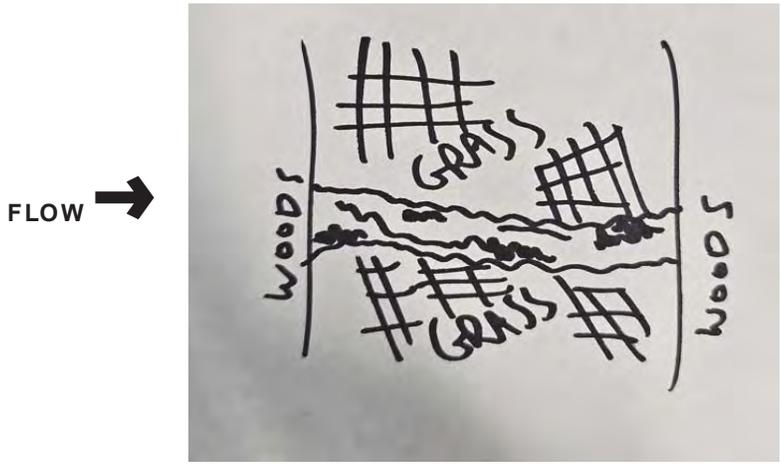
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport RM: Date: 3/28/24

Hocking River Scorers Full Name & Affiliation: V3 Companies - Nathan Barnett

River Code: STORET #: Lat./ Long.: 39.72957 182.63418 Office verified location

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Form for Substrate assessment including categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, and QUALITY. Includes a score box for Substrate with a value of 13.

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts

Form for Instream Cover assessment including categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes a score box for Cover with a value of 9.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

Form for Channel Morphology assessment including categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes a score box for Channel with a value of 13.

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

Form for Bank Erosion and Riparian Zone assessment including categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes a score box for Riparian with a value of 6.5.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Form for Pool / Glide and Riffle / Run Quality assessment including categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes a score box for Pool / Current with a value of 7.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Form for Riffle / Run Quality assessment including categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes a score box for Riffle / Run with a value of 5.

Form for Gradient assessment including categories: GRADIENT, DRAINAGE AREA, %POOL, %GLIDE, %RUN, %RIFFLE. Includes a score box for Gradient with a value of 3.

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st -sample pass- 2nd
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

100
meters

CANOPY

- > 85%- OPEN
- 55%-<85%
- 30%-<55%
- 10%-<30%
- <10%- CLOSED

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
 - 20-<40 cm
 - 40-70 cm
 - > 70 cm/ CTB
 - SECCHI DEPTH

- 1st _____ cm
- pass
- 2nd _____ cm

C) RECREATION

- AREA DEPTH
- POOL: >100ft² >3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

B) AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

D) MAINTENANCE

- PUBLIC / PRIVATE / BOTH / NA
- ACTIVE / HISTORIC / BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- MOVING BEDLOAD-STABLE
- ARMoured / SLUMPS
- ISLANDS / SCoured
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

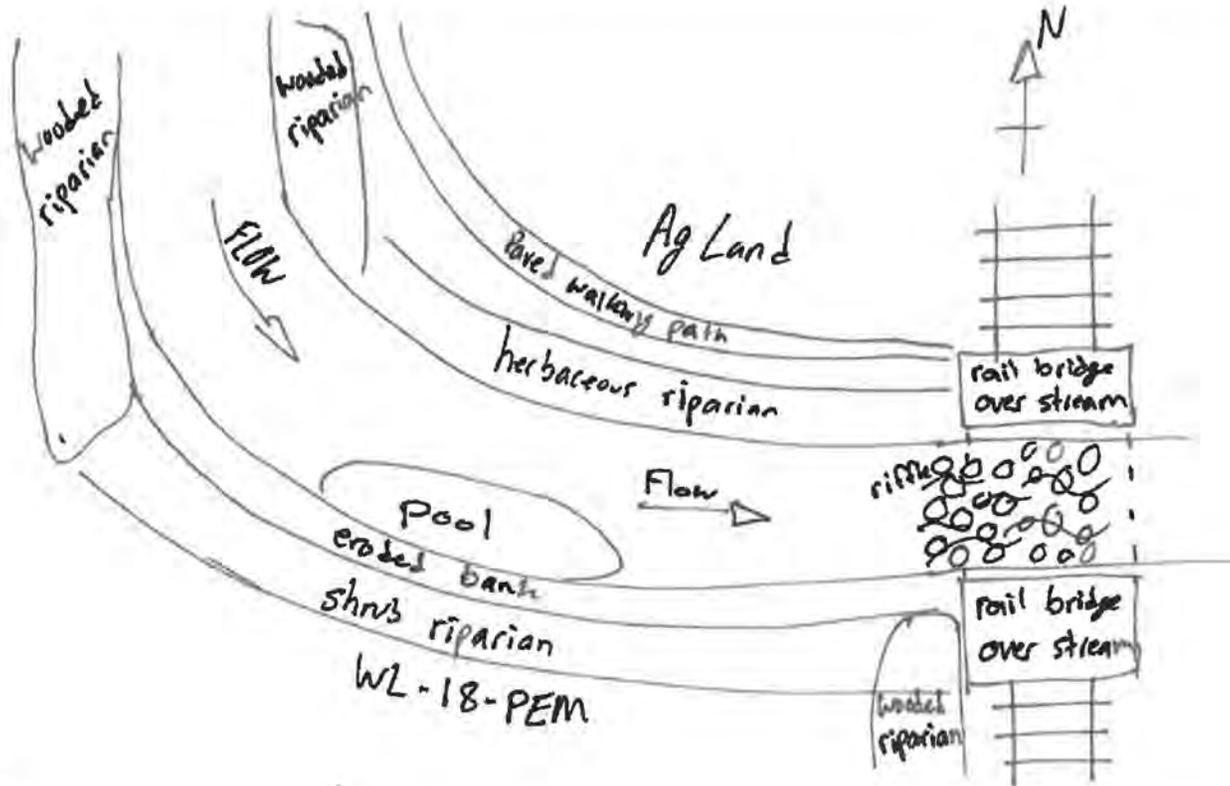
E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

F) MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio
- Legacy Tree:

Stream Drawing:



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport ST-14-PER

RM: Date: 3/28/24

Scorers Full Name & Affiliation: V3 Companies - Nathan Barnett

River Code: STORET #: Lat./Long.: 39.72526 182.63249 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

Substrate assessment table with columns for Best Types, Other Types, Origin, and Quality. Includes checkboxes for various substrate types and a score of 14.

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT Check ONE (Or 2 & average)

Instream Cover assessment table with checkboxes for various cover types and a score of 7.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

Channel Morphology assessment table with checkboxes for Sinuosity, Development, Channelization, and Stability. Includes a score of 8.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

Bank Erosion and Riparian Zone assessment table with checkboxes for Erosion, Riparian Width, Flood Plain Quality, and Conservation Tillage. Includes a score of 3.25.

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment table with checkboxes for Maximum Depth, Channel Width, Current Velocity, and Recreation Potential. Includes a score of 3.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

NO RIFFLE [metric=0]

Riffle and Run Quality assessment table with checkboxes for Riffle Depth, Run Depth, Riffle / Run Substrate, and Riffle / Run Embeddedness. Includes a score of 2.

Gradient assessment table with checkboxes for Gradient and Drainage Area. Includes a score of 3.

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st -sample pass- 2nd
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
 - 20-40 cm
 - 40-70 cm
 - > 70 cm/ CTB
 - SECCHI DEPTH

CANOPY

- > 85%- OPEN
- 55%-<85%
- 30%-<55%
- 10%-<30%
- <10%- CLOSED

C) RECREATION

- AREA DEPTH
POOL: >100ft² >3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

B) AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

D) MAINTENANCE

- PUBLIC / PRIVATE BOTH / NA
- ACTIVE HISTORIC / BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- MOVING-BEDLOAD-STABLE
- ARMORED SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

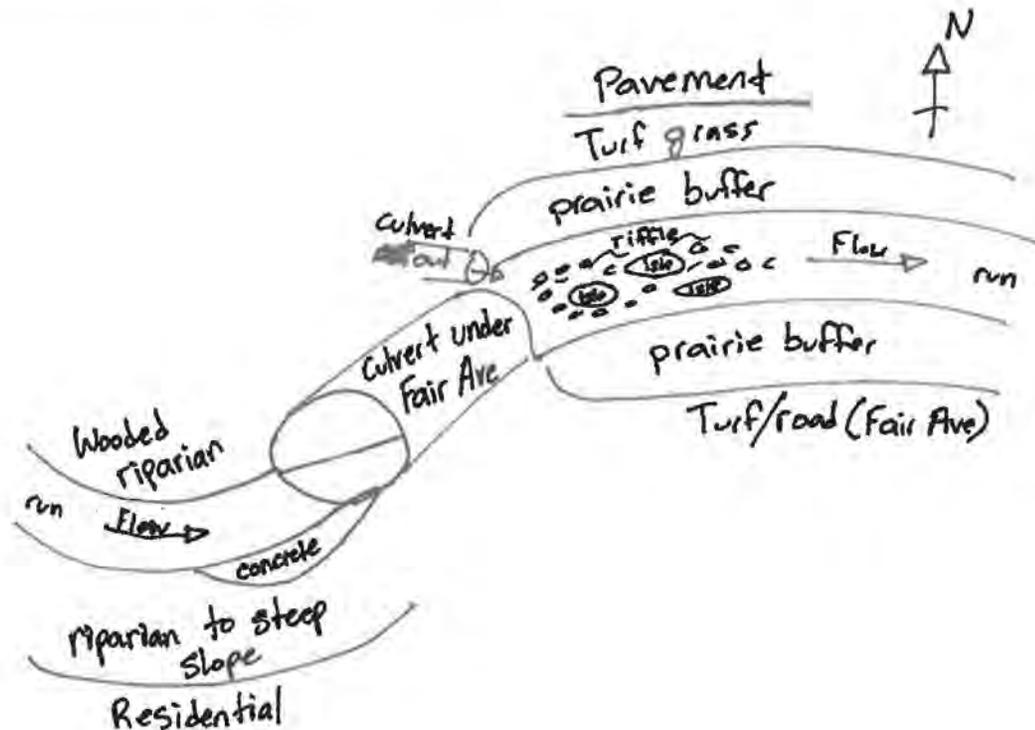
E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

F) MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio
- Legacy Tree:

Stream Drawing:



SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport
 SITE NUMBER ST-11-INT RIVER BASIN _____ DRAINAGE AREA (mi²) 0.06
 LENGTH OF STREAM REACH (ft) 100 LAT. 39.71830 LONG. -82.63740 RIVER CODE _____ RIVER MILE _____
 DATE 03/28/24 SCORER Nathan Barr COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> Bldr Slabs [16 pts]	0%	<input checked="" type="checkbox"/> Silt [3 pt]	30%
<input type="checkbox"/> Boulder (>256 mm) [16 pts]	0%	<input type="checkbox"/> Leaf Pack/Woody Debris [3 pts]	0%
<input type="checkbox"/> Bedrock [16 pt]	0%	<input type="checkbox"/> Fine Detritus [3 pts]	0%
<input type="checkbox"/> Cobble (65-256 mm) [12 pts]	0%	<input checked="" type="checkbox"/> Clay or Hardpan [0 pt]	60%
<input type="checkbox"/> Gravel (2-64 mm) [9 pts]	0%	<input type="checkbox"/> Muck [0 pts]	0%
<input type="checkbox"/> Sand (<2 mm) [6 pts]	10%	<input type="checkbox"/> Artificial [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0.00% (A) Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 3

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):** 8

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters):** 0.75

HHEI Metric Points

Substrate Max = 40

6

A + B

Pool Depth Max = 30

15

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>				
Wide >10m		Mature Forest, Wetland		Conservation Tillage	
<input type="checkbox"/>	<input type="checkbox"/>				
Moderate 5-10m		Immature Forest, Shrub or Old Field		Urban or Industrial	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
<input type="checkbox"/>	<input type="checkbox"/>				
None		Fenced Pasture		Mining or Construction	

COMMENTS: _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order:
County: **Fairfield** Township / City: **Lancaster**

MISCELLANEOUS

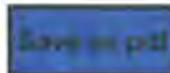
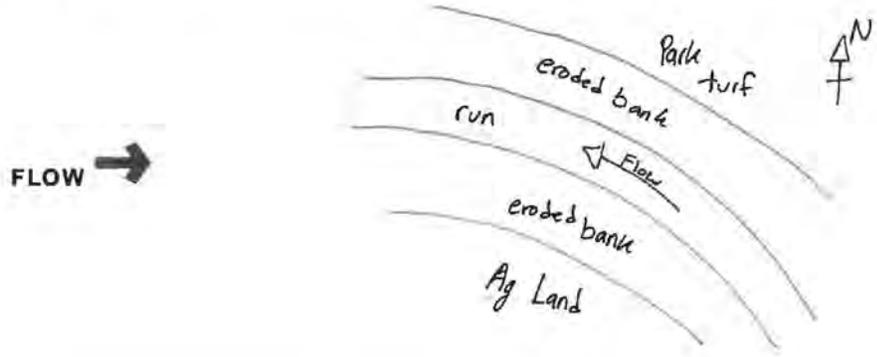
Base Flow Conditions? (Y/N): Y Date of last precipitation: **03/26/24** Quantity: **0.30**
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): **100%**
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: **N/A**
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N): Y If not, please explain:
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N): N Voucher? (Y/N): N Salamanders Observed? (Y/N): N Voucher? (Y/N): N
Frogs or Tadpoles Observed? (Y/N): N Voucher? (Y/N): N Aquatic Macroinvertebrates Observed? (Y/N): N Voucher? (Y/N): N
Comments Regarding Biology: **No biotic evaluation conducted**

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream & Location: W. Lancaster - S. Baltimore - W. Millersport Hunters Run RM: Date: 3/ 28 / 24

River Code: STORET #: Lat./ Long.: 39 . 7020 / 82 . 6401 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present. Check ONE (Or 2 & average). Includes categories: BEST TYPES, OTHER TYPES, ORIGIN, and QUALITY. Score: 16.

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts... AMOUNT Check ONE (Or 2 & average). Includes categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Score: 8.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Score: 8.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average). Includes categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Score: 3.

5) POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Recreation Potential Primary Contact Secondary Contact. Score: 3.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). Includes categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Score: 3.

6) GRADIENT (ft/mi) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6] DRAINAGE AREA (9.2 mi2) %POOL: 0 %GLIDE: 0 %RUN: 60 %RIFFLE: 40 Gradient Maximum 10. Score: 3.

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

STAGE

- 1st -sample pass- 2nd
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
 - 0.2 Km
 - 0.15 Km
 - 0.12 Km
 - OTHER
- 50 meters

CLARITY

- 1st -sample pass- 2nd
- < 20 cm
 - 20-40 cm
 - 40-70 cm
 - > 70 cm/ CTB
 - SECCHI DEPTH

CANOPY

- 1st pass _____ cm
- 2nd pass _____ cm
- > 85%- OPEN
 - 55%-<85%
 - 30%-<55%
 - 10%-<30%
 - <10%- CLOSED

C) RECREATION

- AREA DEPTH
- POOL: >100ft² >3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

B) AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

D) MAINTENANCE

- Circle some & COMMENT
- PUBLIC ~~PRIVATE~~ BOTH / NA
 - ACTIVE ~~HISTORIC~~ BOTH / NA
 - YOUNG-SUCCESSION-OLD
 - SPRAY / SNAG / REMOVED
 - MODIFIED / DIPPED OUT / NA
 - LEVEED / ONE SIDED
 - RELOCATED / CUTOFFS
 - MOVING ~~BEDLOAD-STABLE~~
 - ARMORED / SLUMPS
 - ISLANDS / SCOURED
 - IMPOUNDED / DESICCATED
 - FLOOD CONTROL ~~DRAINAGE~~

E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- ~~BANK / EROSION~~ SURFACE
- ~~FALSE BANK~~ MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

F) MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone x² width
- entrench. ratio
- Legacy Tree:

Stream Drawing:

